

INTEROFFICE MEMORANDUM

Date:

June 17, 2004

To:

B. T. Richards

MS 3921

6-5060

From:

D. T. Peterson / R. R. Honsinger

MS 3655

6-3984

Subject:

CPP-603 EE/CA ALTERNATIVES

Estimating Services has prepared the attached Planning/ROM Cost Estimate for CPP-603 EE/CA Alternatives. Options 1 through 5 were estimated in previous estimates. This estimate is for scope revisions to Options 2 through 5.

- Option 2. Sludge and miscellaneous debris remain in basins. Basin waters are pumped to the ICDF as basins are filled with concrete grout, an engineered cap is constructed, and long term monitoring is performed for 20 years. Total estimated cost for Option 2 is \$5,214,000.
- Option 3. Basin sludge is removed. Basin debris would be left in place. Basin waters are pumped to the ICDF as basins are filled with concrete grout, an earth cap is constructed, and long term monitoring is performed for 20 years. Total estimated cost for Option 3 is \$4,774,000.
- Option 4. Basin sludge and debris are removed. Basin waters are pumped to the ICDF as basins are filled with concrete grout, an earth cap is constructed, and long term monitoring is performed for 20 years. Total estimated cost for Option 4 is \$5,995,000.
- Option 5. Basin sludge and debris are removed. Underwater divers would clean and apply fixative to basin walls and floor. Basin waters are pumped to the ICDF. Radiation shielding and containment barrier are constructed over the basin until the D&D of the CPP-603 complex is complete. Basins will be filled with sand or gravel and long term monitoring is conducted. Total estimated cost for Option 5 is \$7,118,000.

These estimates are based on previous estimates that were developed to support this project, vendor quotes, input from subject matter experts currently working on this project, and assumptions as outlined on the attached Cost Estimate Support Data Recapitulation sheets. Any changes to the methodology used to prepare this could have a significant effect on the cost estimate and should be reviewed for impacts to the TEC.

This project is assumed to be owned by the ICP. The estimated costs do not include provisions for the ICP Allocation Account for the years beyond 2004.

Due to minimal detail and scope definition, this estimate should not be used to establish a cost baseline. The intent of the estimate is for planning purposes only.

If you have any questions or comments, please do not hesitate to contact me at 526-3984 or Lotus Notes - ID HONSRR.

HONSRR

Attachments

cc:

Estimate File 2731-B

R. R. Honsinger File (RRH-11-04)

Uniform File Code: 8000

Disposition Authority: A16-1.5-b

Retention Schedule: Cut off at the end of each fiscal year. Destroy 15 years after cutoff.

NOTE: Original disposition authority, retention schedule, and Uniform Filing Code applied by the sender may not be appropriate for all recipients. Make adjustments as needed.

Bechtel BWXT Idaho, LLC

COST ESTIMATE SUPPORT DATA RECAPITULATION

Project Title:

CPP-603 EE/CA Alternatives D. T. Peterson / R. R. Honsinger

Estimator: Date:

June 17, 2004

Estimate Type: Comparative Analysis

File:

2731-B

Approved By:

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I. **PURPOSE:** Brief description of the intent of how the estimate is to be used, i.e., for engineering study, comparative analysis, DWP, LCB out-year planning, BCP, etc.

This Comparative Analysis provides the reader with ROM values respective to the level of project development. The initiation phase, due to limited resource investment, is not intended to be the foundation by which baselines are established. Baselines will be established during the definition (conceptual design) phase. Understandably, technical requirements and associated costs could increase or decrease as additional data is acquired during the more comprehensive definition phase.

II. **SCOPE OF WORK:** Brief statement of the project's objective. Thorough overview and description of the proposed project. Identify work to be accomplished, as well as any specific work to be excluded.

This analysis addresses the resources required to deactivate the CPP-603 basins. Please refer to the cost estimate summary and detail sheets for activities included in the analysis. Four options have been estimated for the deactivation of the basins, which include the following scenarios:

- Option 2. Basin water would be pumped/piped to the ICDF evaporation ponds. Sludge and debris would be left in the basins. As basin water is removed, concrete grout would be placed in the basins to encapsulate sludge, debris, and contamination left on the basin walls and floor. An engineered cap would be constructed on the existing basins. Four monitoring wells would be installed for long term monitoring.
- Option 3. This option reflects the costs to remove basin sludge. Basin debris would be left in place. Basin water would be pumped/piped to the ICDF evaporation ponds. As basin water is removed, concrete grout would be placed in the basins to encapsulate debris and contamination left on the basin walls and floor. An earth cap would be installed over the basins. Long term monitoring and maintenance would be required to ensure encapsulated contaminates remain in a stable condition.

- Continued -

Project Title: CPP-603 EE/CA Alternatives

File:

2731-B

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- Option 4. Sludge and debris would be removed from the basins. Basin water would be pumped/piped to the ICDF evaporation ponds. As basin water is removed, concrete grout would be placed in the basins to encapsulate contamination left on the basin walls and floor. An earth cap would be installed over the basins. Long term monitoring and maintenance would be required to ensure encapsulated contaminates remain in a stable condition.
- Option 5. Sludge and debris would be removed from basins. Underwater divers would clean and apply fixative to basin walls and floors. Basin water would be pumped/piped to the ICDF evaporation ponds for final disposal. Radiation shielding would be installed around perimeter of basin wall. A containment barrier would be constructed over the basins to contain airborne contamination. The basins will be filled with gravel or sand. Long term monitoring and maintenance (20 years) would be conducted to ensure contaminates remain encapsulated.
- III. BASIS OF THE ESTIMATE: Overall methodology and rationale of how the estimate was developed. Source documents to include drawings, design reports, engineers' notes and/or other documentation upon which the estimate is originated. Overall explanation of sources for resource pricing.

Option 2.

- A. Cost used to remove the basin water was based on Estimate File No. 8530 DWP2-007A. This estimate was completed in FY 2000, and costs have been escalated at an average rate of 3% per year to 2004 dollars.
- B. Basin grouting costs are based on Estimate File No. 2361-D, CPP-603 Basin Deactivation, August 15, 2003. Costs are represented in FY 2004 dollars.
- C. Engineered basin cap is based on information published in the Conceptual Cover Design for RCRA Closure of the ICPP Waste Calcine Facility.
- D. Monitoring well costs based on information provided by BBWI Surveillance, Monitoring, and Long Term Ops personnel.
- E. Costs for project management and support are based on estimated project duration of one vear.
- F. Costs for operation and maintenance are based on estimated activities and surveillance costs for 20 years.

Option 3.

- A. Costs to remove, solidify and on-Site disposal of sludge are based on vendors quote (Duratek). (March 24, 2004)
- B. Cost used to remove the basin water was based on Estimate File No. 8530 DWP2-007A. This estimate was completed in FY 2000, and costs have been escalated at an average rate of 3% per year to 2004 dollars.

Continued -

Project Title: CPP-603 EE/CA Alternatives

File:

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- C. Basin grouting costs are based on estimate File No. 2361-D, CPP-603 Basin Deactivation, August 15, 2003. Costs are represented in FY 2004 dollars.
- D. Earth cap is based on information published in the Conceptual Cover Design for RCRA Closure of the ICPP Waste Calcine Facility.
- E. Costs for project management and support are based on estimated project duration of one year.
- F. Costs for surveillance and maintenance are based on estimated activities and surveillance costs for 20 years.

Option 4.

- A. Costs to remove, solidify and on-Site disposal of sludge are based on vendors quote (Duratek). (March 24, 2004).
- B. Costs to remove basin debris are based on detailed estimate and assumptions and are addressed on the detailed item report. The actual costs for debris removal in the MTR canal were used as a basis for the debris removal in the South Basin of CPP-603.
- C. Cost used to remove the basin water was based on Estimate File No. 8530 DWP2-007A. This estimate was completed in FY 2000, and costs have been escalated at an average rate of 3% per year to 2004 dollars.
- D. Basin grouting costs are based on estimate File No. 2361-D, CPP-603 Basin Deactivation, August 15, 2003. Costs are represented in FY 2004 dollars.
- E. Earth cap is based on information published in the Conceptual Cover Design for RCRA Closure of the ICPP Waste Calcine Facility.
- F. Costs for project management and support are based on estimated project duration of one year.
- G. Costs for surveillance and maintenance are based on estimated activities and surveillance costs for 20 years.
- H. Grouting costs are based on Estimate File No. 2361-D. Costs are represented in FY 2004 dollars, and have been escalated to the mid point of the evaporation process.
- I. Project management costs are based on a part time effort to support the grout placement during the water evaporation process.
- J. Costs for operation and maintenance are based on estimated activities and surveillance costs for 20 years.

Option 5.

- A. Costs to remove, solidify and on-Site disposal of sludge are based on vendors quote (Duratek). (March 24, 2004)
- B. Costs to remove basin debris are based on detailed estimate and assumption and addressed on the detailed item report.

Continued –

Project Title:

CPP-603 EE/CA Alternatives

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- C. Cost used to remove the basin water was based on Estimate File No. 8530 DWP2-007A. This estimate was completed in FY 2000, and costs have been escalated at an average rate of 3% per year to 2004 dollars.
- D. Underwater cleaning and fixative costs are based on vendor quote. See project file for details.
- E. Shielding costs are based on input from G. E. Tomlinson.
- F. Cost for the basin cover is based on detailed estimate and assumption and addressed on the detailed item report.
- G. Earth cap is based on information published in the Conceptual Cover Design for RCRA Closure of the ICPP Waste Calcine Facility.
- H. Costs for project management and support are based on an estimated project duration of one year.
- I. Costs for operation and maintenance are based on estimated activities and surveillance costs for 20 years.
- IV. <u>ASSUMPTIONS</u>: Condition statements accepted or supposed true without proof of demonstration; statements adding clarification to scope. An assumption has a direct impact on total estimated cost.

Option 2.

A pipeline would be constructed between CPP-603 and the ICDF evaporation ponds. Basin water would be pumped to the ICDF. Sludge and debris would remain in the basins. It was assumed the sludge and miscellaneous debris would remain in their current state and be entombed with concrete grout. The engineered cap that will be contracted over the basins will be similar in design as the one designed in Conceptual Cover Design for RCRA Closure of the ICPP Waste Calcine Facility. Four monitoring wells will be installed and surveillance and monitoring of the wells and cap will continue for 20 years.

Option 3.

A subcontractor would treat, stabilize, and ship sludge to an on-Site disposal area. Basin water will be piped to the ICDF evaporation ponds for disposal. It was assumed no costs would be charged to the project for the disposal of this water. The earth cap that will be contracted over the basins will be similar in design to the one included in the Conceptual Cover Design for RCRA Closure of the ICPP Waste Calcine Facility. Minimal long term monitoring and maintenance would be required to ensure encapsulated contaminates remain in a stable condition. Project management and support efforts were assumed to be a full-time effort during the construction phase of this project.

Continued –

Project Title: CPP-603 EE/CA Alternatives

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Option 4.

Sludge and debris will be removed from the basins and disposed of at an on-Site location. Basin water will piped to the ICDF evaporation ponds for disposal. Soils used to construct the low permeability soil layer of the earth cap will be imported from an off-Site source. Soil used to construct the vegetated soil layer will be imported from an on-Site source at no cost to the project. Long term monitoring and maintenance would be required to ensure contamination levels remain in a stable condition.

Option 5.

Sludge and debris will be removed from the basins and disposed of at an on-Site location. Basin water will piped to the ICDF evaporation ponds for disposal. The radiation shielding was assumed to be ½" carbon steel sheets installed around the perimeter of the basins. The contamination containment will be constructed on plastic sheeting installed over structural framing. Underwater divers will clean and apply a fixative to basin walls and floors. The basins will be filled with gravel that will be imported from an on-Site source. At the end of the surveillance and monitoring operations, an earth cap will be constructed on the basins.

V. <u>CONTINGENCY GUIDELINE IMPLEMENTATION</u>: Explanation of methodology used in determining overall contingency. Identify any specific drivers or items of concern.

This analysis is being presented for comparisons only and does not include any contingency.

VI. <u>ESTIMATE SUMMARY</u>: Total dollars/hours and Rough Order Magnitude (ROM) allocations of the methodologies used to develop the cost estimate.

The estimate summary table is not applicable to the EECA alternative planning estimates because the estimates do not represent total project costs.

- Continued -

Project Title: CPP-603 EE/CA Alternatives

File:

2731-B

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Cost Elements		Estimate
Labor (BBWI)	· ·	
Hours (BBWI)	Hrs	
Material (BBWI)	\$	
ODC (Other Direct Costs)	\$	
Contingency	\$	
Total Cost	\$	NA

Estimate Methodology	ROM Percentage %	
SME (Unrecorded Observations)		%
Recorded Actuals	0	
Parametric	0	
Vendor Quotes		
Other		
Total	NA	%

VII. OTHER COMMENTS/CONCERNS SPECIFIC TO THE ESTIMATE:

- A. These analyses do not represent total project costs. Engineering, project preparation, safety and heath documents, etc., are not included. These costs were assumed to be relatively equal for the four alternatives. These analyses are presented for comparison purposes only, and are intended only to establish a path forward for the referenced project.
- B. Due to percentage rounding, the Success reports will not reflect the exact dollars as shown in the detail reports.
- C. The estimated costs do not include provisions for the ICP Allocation.

08/31/2004 10:00:46

INEEL

Project Summary Report

Client: B. T. Richards
Prepared By: D. T. Peterson I R. R. Honsinger
Estimate Type: PlanningIROM

Project Name: CPP-603 EEICA Alternatives
Options 2, 3, 4, 5
Project Location: INEEL / INTEC
Estimate Number: 2731-8

Level	Group 1.1.4	Description OPTION 2	Estimate Subtotal \$4,607,952	Escalation \$658,641	Contingency \$0	Contingency % 0.00%	TOTAL \$5,266,594
1.2.1		Basin Water Removal To ICDF Evaporation Pond	\$486,892	\$22,640	0\$	0.00%	\$509,532
1.2.2		Basin Grouting With Rapid Water Removal & Inplace Sludge & Debris	\$585,398	\$27,221	\$0	0.00%	\$612,619
1.2.2.1		Basin grouting W/inplace Sludge & Debris	\$585,398	\$27,221	0\$	0.00%	\$612,619
1.2.3		Engineered Basin Cap	\$903,508	\$42,013	\$0	0.00%	\$945,522
1.2.3.1		Purchase & Haul Low - Permeability Soil Layer	\$404,221	\$18,796	0\$	0.00%	\$423,017
1.2.3.2		Vegetated Soil Layer	\$147,885	\$6,877	\$0	0.00%	\$154,761
1.2.3.3		Filter Fabric, Sand Drainage Layer & Fiexible Membrane Liner	\$317,674	\$14,772	0\$	0.00%	\$332,446
1.2.3.4		Engineering	\$33,729	\$1,568	0\$	0.00%	\$35,297
1.2.4		Monitoring Wells	\$600,000	\$27,900	0\$	0.00%	\$627,900
1.2.5		Project Management & Support	\$481,659	\$22,397	0\$	0.00%	\$504,057
1.2.6		S&M Costs	\$1,550,494	\$516,470	0\$	0.00%	\$2,066,964
1.3		OPTION 3	\$4,406,900	\$420,013	\$0	0.00%	\$4,826,912
1.3.1		Sludge Removal	\$1,550,350	\$72,091	0\$	0.00%	\$1,622,441
1.3.1.1		Sludge Removal	\$1,550,350	\$72,091	0\$	0.00%	\$1,622,441
1.3.2		-Basin Water Removal To ICDF Evaporation Pond	\$486,892	\$22,640	\$0	0.00%	\$509,532
1.3.3		∼Basin Grouting With Rapid Water Removal	\$585,398	\$27,221	0\$	0.00%	\$612,619
1.3.4		-Earth Cap Over Building Foot Print	\$552,106	\$25,673	0\$	0.00%	\$577,779
1.3.4.1		Purchase & Haul Low - Permeability Soil Layer	\$404,221	\$18,796	0\$	0.00%	\$423,017
1.3.4.2		Vegetated Soil Layer	\$147,885	\$6,877	0\$	0.00%	\$154,761
1.3.5		Project Management & Support	\$481,659	\$22,397	\$0	%00.0	\$504,057

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL / INTEC
Estimate Number: 2731-8

TOTAL \$1,000,484	\$6,046,671	\$1,622,441	\$973,954	\$102,222	\$84,955	\$583,568	\$110,259	\$92,950	\$509,532	\$612,619	\$577,779	\$423,017	\$154,761	\$749,861	\$1,000,484	\$7,170,842	\$509,532	\$1,622,441	\$973,954	\$102,222	\$84,955	\$583,568
Contingency % 0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	%00.0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Contingency \$0	\$0	0\$	\$0	0\$	0\$	0\$	0\$	o \$	0\$	0\$	0\$	0\$	%	0\$	%	0\$	0\$	0\$	0\$	0\$	0\$	S
Escalation \$249,990	\$474,211	\$72,091	\$43,277	\$4,542	\$3,775	\$25,930	\$4,899	\$4 ,130	\$22,640	\$27,221	\$25,673	\$18,796	\$6,877	\$33,319	\$249,990	\$1,029,278	\$22,640	\$72,091	\$43,277	\$4,542	\$3,775	\$25,930
Estimate Subtotal \$750,494	\$5,572,460	\$1,550,350	\$930,678	\$97,680	\$81,180	\$557,638	\$105,360	\$88,820	\$486,892	\$585,398	\$552,106	\$404,221	\$147,885	\$716,542	\$750,494	\$6,141,564	\$486,892	\$1,550,350	\$930,678	\$97,680	\$81,180	\$557,638
DescriptionS&M Costs	OPTION 4	Sludge Removal	Debris Removal	North Basin - Debris Removal	Middle Basin - Debris Removal	South Basin - Debris Removal	Canal - Debris Removal	Engineering and Remote Tool Development	Basin Water Removal To ICDF Evaporation Pond	Basin Grouting With Rapid Water Removal	Earth Cap Over Building Foot Print	Purchase & Haul Low - Permeability Soil Layer	Vegetated Soil Layer	Project Management & Support	S&M Costs	OPTION 5	Basin Water Removal To ICDF Evaporation Pond	Sludge Removal	Debris Removal	North Basin - Debris Removal	Middle Basin - Debris Removal	South Basin - Debris Removal
Level Group	1.4	1.4.1	1.4.2	1.4.2.1	1.4.2.2	1.4.2.3	1.4.2.4	1.4.2.5	1.4.3	1.4.4	1.4.5	1.4.5.1	1.4.5.2	1.4.6	1.4.7	1.5	1.5.1	1.5.2	1.5.3	1.5.3.1	1.5.3.2	1.5.3.3

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08/31/2004 10:00:46

Project Summary Report

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives Opitons 2, 3, 4, 5 Project Location: INEEL I INTEC Estimate Number: 2731-8

TOTAL \$110,259 \$71,400 \$102,146 \$469,214 \$655,766 \$482,220 \$1,108,465 \$683,093 \$249,910 \$394,408 \$92,950 \$504,057 \$933,004 \$162,594 \$231,814 Contingency % 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% %00.0 0.00% 0.00% 0.00% 0.00% 0.00% Contingency \$0 0\$ 20 Ş 8 Ş \$0 80 \$ \$0 8 Ş 8 **\$** ŝ Escalation \$4,899 \$161,017 \$66,379 \$29,138 \$3,173 \$4,539 \$20,849 \$278,872 \$21,427 \$22,397 \$102,026 \$380,898 \$94,638 \$276,971 \$481,659 \$147,885 \$233,392 \$96,215 \$88,820 \$626,628 \$68,228 \$460,793 \$448,365 \$97,607 \$404,221 5831,494 \$552,106 \$137,176 **Estimate Subtotal** --Remove & Dispose of Basin Cover & Shielding & Basin Fill --- Engineering and Remote Tool Development -- Basin Decontamination / Stabilization ----Purchase & Haul Low - Permeability Soil -Earth Cap Over Building Foot Print -Basin Containment For Air Borne ----Remove & Dispose of Basin Cover & Shielding ----Basin Cover Engineering & Design -- Project Management & Support ----Basin Cover Construction --- Canal - Debris Removal ---Vegetated Soil Layer ---Radiation Shielding Contaminaton Description -- S&M Costs ----Basin Fill Layer Group <u>Level</u> 1.5.3.6 1.5.4..1 1.5.8.1 1.5.8.2 1.5.9.1 1.5.9.2 1.5.4.2 1.5.4.3 1.5.5 1.5.6 1.5.7 1.5.8 1.5.9 1.5.4

INEEL

\$23,311,019

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\$2,582,143

\$20,728,876

Total CPP-603 EE/CA ALTERNATIVES

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Material Costs where applicable include Idaho State Sales Tax

Page No.

\$2,803

29.03% \$631

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\$677

\$36.78 \$1,495

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6,774.00

CN-EQMD

DIRT

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Operator & Loader

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\$108,976

29.03% \$24,518

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\$35,225

\$36.34 \$49,233

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Teamster & Belly Dump Memo: Assume 4 Hr. for round trip with 20 cubic yard belly dump.

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CN-TRHV

\$275,326

29.03% **\$61**,945

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\$31.50 \$213,381

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6,774.00

1.00 DIRT
Purchase Low Permeability Soil
Memo: Assume soil will be imported from an off-Site source.

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Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Detail Item Report

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

Code	Description Contractor	Resource Qty UOM	Labor ty_UOM_Hours	Labor for Hourly Rate frs Cost	Equip Hours	Equipment Hourly Rate Cost	Material Unit Cost Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
,	CPP-603 EE/CA ALTERNATIVES	VES	115,958	58 \$6,084,668		\$418,944	\$1,748,757	\$5,780,415	\$6,696,092	\$20,728,876
2 1.1.4	OPTION 2		27,013	113 \$1,129,966		\$122,873	\$356,576	\$600,000	\$2,398,536	\$4,607,952
co.	Basin Water Removal To ICDF Evaporation Pond	vaporation Pond		0\$		9	0\$	\$0	\$486,892	\$486,892
Design & cor months Memo: Cos	1.00 ICP Design & construct pipe line, includes pump costs for 2 1.00 LS \$0 \$486,892 months Memo: Cost are based on Estimate File No. 8530 DWP2-007A. This estimate was completed in FY 2000, and costs have been escalated at an average rate of 3% per year to 2004 dollars. It was assumed no ICDF costs would be charged to the project. FY 2000 \$432,597.	/P2-007A. This estim 2,597.	1.00 LS nate was complete	\$0 d in FY 2000, and costs P	have been escale	\$0 sted at an average rat	\$0 e of 3% per year to 2	\$0 004 dollars. It was a	\$486,892 \$185,00%	\$486,892

Section Sect	ю	W.i		0\$	0\$	0\$	0\$	\$585,398	\$585,398
Concrete Placement 1.00 LS \$0 \$0 \$0 \$585,398 Engineered Basin Cap 5,921 \$228,370 \$122,873 \$356,576 \$0 \$195,689 Purchase & Haul Low - Permeability Soil Layer 1,637 \$60,200 \$39,896 \$213,381 \$0 \$90,944	ا چ	Basin grouting Winplace Sludge & Debris		represented in FY-04 dollars. \$0	0\$	\$0	0\$	\$585,398	\$585,398
Engineered Basin Cap 5,921 \$228,370 \$122,873 \$356,576 \$0 \$195,689 Purchase & Haul Low - Permeability Soil Layer 1,637 \$60,200 \$39,696 \$213,381 \$0 \$90,944	~	1.00	·	0\$	0 \$	0\$	9	100.00% \$585,398	\$585,398
	9	Engineered Basin Cap Purchase & Haul Low - Permeability Soil Layer	5,921	\$228,370 \$60,200	\$122,873 \$39,696	\$356,576 \$213,381	\$ \$	\$195,689 \$90,944	\$903,508 \$404,221

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\$4,625

29.03% \$1,040

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\$1,450

\$36.78 \$2,134

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9,669.00

CN-EQMD

DIRT

1.00

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Operator & Compactor

\$4,625

29.03% **\$**1,040

\$0

\$0

\$1,450

\$36.78 \$2,134

28

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9,669.00

CN-EQMD

DIRT

1.00

Operator & Water Wagon

53

\$5,997

29.03% **\$1**,349

\$0

\$

\$2,514

\$36.78 \$2,134

28

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9,669.00

CN-EQMD

DIRT

1.00 Operator & Motor Grader

54

\$4,001

29.03% \$900

\$0

\$0

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\$36.78 \$2,134

28

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9,669.00

CN-EQMD

DIRT

1.00

Operator & Loader

20

\$110,212

29.03% \$24,796

8

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\$50,279

\$36.34 \$35,137

296

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CN-TRHV

Teamster & Belly Dump Memo: Assume 2 Hr. for round trip with 20 cubic yard belly dump.

DIRT

1.00

17

10:01:55

08/31/2004 INEEL

Project Name: CPP-603 EE/CA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL I INTEC
Estimate Number: 2731-8

Client: B. T. Richards
Prepared By: D. T. Peterson I R. R. Honsinger
Estimate Type: PlanningIROM

Detail Item Report

					Labor	Labor Hourly Rate	Equip	Equipment Hourly Rate	Material Unit Cost	Subcontract Unit Cost	Other %	TOTAL
#1	# Code Description Contractor	Resource	Oth NOM	•	Hours	Cost	Hours	Cost	Cost	1800	1800	200
ine gal	1.00 DIRT Operator & Water Wagon	CN-EQMD	6,774.00	₽	41	\$36.78 \$1,495		\$1,016	0\$	0\$	29.03% \$729	\$3,240
#C	1.00 DIRT Operator & Motor Grader	CN-EQMD	6,774.00	Շ	14	\$36.78 \$1,495		\$1,761	8	0\$	29.03% \$945	\$4,201
925. 1961	1.00 DIRT Operator & Compactor	CN-EQMD	6,774.00	ò	4	\$36.78 \$1,495		\$1,016	\$	\$	29.03% \$729	\$3,240
Pro-	1.00 DIRT Grade Checker	T CN-SURR	40.00	H.s.	40	\$34.68 \$1,387		9	0\$	8 0	29.03% \$403	\$1,790
63	1.00 DIRT Foreman & Pickup	T CN-GEN	80.00	Hrs.	80	\$45.00		0\$	80	0\$	29.03%	\$4,645
€. 57:	Vegetated Soil Layer Basis of Estimate:	er Assume this soil will be imported from an on-Site source at no cost to the subcontractor or project.	oorted from	an on-Si	1,391 fe source a	\$51,490 it no cost to the s	ubcontractor	\$58,345 or project.	\$4,778	0\$	\$33,272	\$147,885

Material Costs where applicable include Idaho State Sales Tax Page No. 3

10:01:55

08/31/2004 INEEL

Detail Item Report

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

TOTAL	\$1,790	\$9,862	\$6,774	\$317,674	\$68,831	\$1,401	\$54,488	\$1,620	\$2,101	\$1,620	\$895
Other % Cost	29.03% \$403	29.03% \$2,219	29.03% \$1,524	\$71,472	29.03% \$15,486	29.03% \$315	29.03% \$12,259	29.03% \$364	29.03% \$473	29.03% \$364	29.03% \$201
Subcontract Unit Cost Cost	9	0\$	0\$	0\$	0\$	O\$	0\$	0\$	0 \$	0 \$	0 \$
Material Unit Cost Cost	9	\$27.30 \$4,778	%	\$138,418	\$16.75 \$53,345	0\$	9	\$0	0\$	%	0\$
Equipment Hourly Rate Cost	0\$	\$935	\$750	\$24,833	9	\$339	\$17,612	\$508	\$881	\$508	0\$
Equip <u>Hours</u>											
Labor Hourly Rate Cost	\$34.68 \$1,387	\$36.78 \$1,931	\$45.00 \$4,500	\$82,951	9	\$36.78 \$747	\$36.34 \$24,617	\$36.78 \$747	\$36.78 \$747	\$36.78 \$747	\$34.68 \$694
Labor <u>Hours</u>	40	53	100	2,373		8	229	70	50	50	8
UOM H H	Hrs.	κ κ	H.S.		₽	Շ	₹	Շ	Շ	Շ	克克
Oth L	40.00	175.00 M. S	100.00		3,387.00	3,387.00	3,387.00	3,387.00	3,387.00	3,387.00	20.00
Resource	CN-SURR	CN-EQMD	CN-GEN	Filter Fabric, Sand Drainage Layer & Flexible Membrane Liner	i an off-Site source.	CN-EQMD	CN-TRHV cubic yard belly dump.	CN-EQMD	CN-EQMD	CN-EQMD	CN-SURR
Contractor	DIRT	DIRT	DIRT	Sand Drainag	DIRT Imported from	DIRT	<i>DIRT</i> Id trip with 20	DIRT	DIRT	DIRT	DIRT
Code Description	1.00 Grade Checker	1.00 Allowance for seeding	1.00 Foreman & Pickup	Filter Fabric, Sar Membrane Liner	1.00 DIRT Purchase Sand Memo: Assume sand will be imported from an off-Site source.	1.00 Operator & Loader	1.00 DIRT Teamster & Belly Dump Memo: Assume 4 Hr. for round trip with 20 cubic yard belly dump.	1.00 Operator & Water Wagon	1.00 Operator & Motor Grader	1.00 Operator & Compactor	1.00 Grade Checker
#L1	52	8	27.	28	82	30	31	8	50 51	<i>F</i> 6	35

Material Costs where applicable include Idaho State Sales Tax Page No. 4

Estimating Services Department

Project Name: CPP-603 EEICA Alternatives
Options 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

Detail Item Report

Cllent: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Contractor	Resource Qty UOM		Labor Hours	Labor Hourly Rate Cost	Equip <u>Hours</u>	Equipment Hourly Rate Cost	Material Unit Cost Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
CN-LABR	174,240.00	0 SF	269	\$32.75 \$22,825		\$1,742	\$0.21 \$36,590	0\$	29.03%	\$78.912
CN-LABR 174	174,240.00	SF	<i>1</i> 69	\$32.75 \$22,825		\$1,742	\$0.28 \$48,482	9	29.03% \$21.206	730 700
CN-GEN 2	200.00	Hrs.	200	\$45.00		\$1,500	%	9	29.03%	6
			520	\$33,729		0\$	80	9\$	\$0	\$33.729
E04 240.00	8	Hrs.	240	\$63.01		0\$	09	C	5	6
E18 40.00	0	H.	40	\$60.64		%	9		9 9	\$15,122
E28 80.00		H.s.	80	\$72.34 \$5,787		0 \$	09	S 6) (\$2,420
T03 80.00		Hrs.	80	\$35.20 \$2,816		0\$	9	; Ç	0 * 4	45,787
204 80.00		Hrs.	80	\$94.72 \$7,578		0\$	0	S OS	S \$	66.01
			0	\$0		\$0	0\$	\$600,000	0\$	\$600,000
1.00 ICP 19 Wells Cost based on information provided by BBWI Surv, Monitor & Long Term Ops personnel.	0 1	EA Ps persor	nnel.	0\$		0\$	0\$	\$150,000.00	0\$	\$600,000

Material Costs where applicable include Idaho State Sales Tax Page No. 5

Estimating Services Department

Project Name: CPP-603 EEICA Alternatives
Opitions 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

Detail Item Report

Client: B. T. Richards
Prepared By: D. T. Peterson I R. R. Honsinger
Estimate Type: PlanningIROM

#1	Code Descri	Description Contractor	Resource	Oth	NOM H	Labor Hours	Labor Hourly Rate Cost	Equip Hours	Equipment Hourly Rate Cost	Material Unit Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
7		Project Management & Support				8,292	\$431,516		0\$	0\$	\$	\$50,143	\$481,659
46		E28 PROJ MGMNT - ENGINEERING/SCIEN 1 FTE	E28	1.00	Year	1,750	\$72.34 \$126,595		0\$	0\$	0\$	0\$	\$126,595
43	X12 ENVIRONMENTAL RE	1.00 ICP ESTORATION	X12	1.00	Year	1,750	\$48.62 \$85,085		0 \$	9	9	O\$	\$85,085
90	U60-INL RADIOLOGICAL CON	1.00 7600-7632 ITROL TECH	U60-INL	1.00	Year	1,750	\$38.39 \$67,183		\$	9	0\$	65. <i>00%</i> \$43,669	\$110,851
19	208 SUPERVISOR, OPER	1.00 7600-7632 ATIONS	Z08-INL	1.00	Year	175	\$56.92 \$9,961		9	9	0 \$	65.00% \$6,475	\$16,436
25	E19 SAFETY ENGINEERIN	1.00 ICP NG	£19	1.00	Year	875	\$58.42 \$51,118		0 \$	0 \$	0\$	\$	\$51,118
8	S08 INDUSTRIAL HYGIEN	1.00 ICP IE	808	1.00	Year	875	\$48.47 \$42,411		0\$	9	%	\$	\$42,411
55	P44 PLANNING AND CON	1.00 KCP TROLS	P44	1.00	Year	437	\$46.21 \$20,194		9	9	O\$	0 \$	\$20,194
65 0	F22 COST ESTIMATING	1.00 ICP	F22	1.00	Year	170	\$52.99 \$9,008		0\$	0\$	0 \$	\$0	800'6\$
9	A14 SECRETARIAL	1.00 ICP	A14	1.00	Year	350	\$23.05 \$8,068		9	9	9	\$0	\$8,068
57	P21 1.0 SUBCONTRACT ADMIN	1.00 ICP IN	P21	1.00	Year	160	\$74.34 \$11,894		0\$	\$0	\$0	\$0	\$11,894

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives Opitons 2, 3, 4, 5 Project Location: INEEL I INTEC Estimate Number: 2731-8

\$1,550,494 \$202,699 \$183,706 \$170,122 \$193,968 \$800,000 TOTAL COST 65.00% \$79,851 65.00% \$67,018 60.00% \$68,890 *50.00%* **\$**64,656 *100.00%* \$800,000 \$1,080,414 Cost Subcontract Unit Cost \$ 30 \$3 Ş S \$0 Cost \$0 Ç, 80 ş ŝ 8 Material Unit Cost Cost \$0 Equipment Hourly Rate Cost \$0 \$ ဋ္ဌ **\$ 8** Equip Hours \$38.39 \$122,848 \$40.41 \$129,312 \$32.22 \$35.88 \$103,104 \$470,080 **₽** \$114,816 Labor Hourty Rate Cost 3,200 3,200 3,200 3,200 12,800 Resource Qty UOM Hours Well monitoring & maintenance
Memo: Cost based on information provided by BBWI Sury, Monitor & Long Term Ops personnel. Years 20.00 Years 20.00 Years 20.00 Years 20.00 U29-INL U60-INL T15-INL F28-INL U60-INL 1.00 7600-7632 U60-INI
RADIOLOGICAL CONTROL TECH (Monitoring & surveillance) T16-INL 1.00 7100-7350 T16-IN INDUST SAFETY/HEALTH TECH (Monitoring & surveillance) 5M00-5M9B P000-P230 Description Contractor ç F28-INL 1.00
SECURITY COORDINATORS F21-INL 1.00 OTHER FACILITY SERVICES S&M Costs 1.00 Code #1 99 00 50 50 50 63 5 s (4) 10

64	OPTION 3			24,121	24,121 \$1,013,287	\$98,040	\$218,159	\$1,550,350	\$1,550,350 \$1,527,064	\$4,406,900
99	Sludge Removal Basis of Estimate:	Costs are based on ven	ndors quote (Duratel	0 k) to remove, s	\$0 Costs are based on vendors quote (Duratek) to remove, solidification and on Site disposal of sludge. (March 24, 2004)	\$0 nosal of sludge. (March	\$0	\$1,550,350	0\$	\$1,550,350
99	Sludge Removal			0	0\$	0\$	0\$	\$1,550,350	0\$	\$1,550,350
\$40°	1.00 ICP ISBUdge Removal, solidification, and on Site disposal of sludges	N Site disposal of	1.00	ST	o,	0\$	0\$	\$1,520,350.00 \$1,520,350	0\$	\$1,520,350
88	1.00 ICP Allowance for on Site INEELsupport (temporary light, air and flush water)	emporary light, air	1.00 Project	ject	0\$	0\$	0\$	\$10,000.00	\$0	\$10,000
69	1.00 ICP Allowance for Subcontractors PPEs		1.00 Project	je.	0\$	9	Ç	\$10,000.00	Ş	000

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Estimating Services Department

Material Costs where applicable include Idaho State Sales Tax ထ

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Client: B. T. Richards
Prepared By: D. T. Peterson I R. R. Honsinger
Estimate Type: PlanningIROM

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

\$10,000 \$486,892 \$486,892 TOTAL COST Costs are based on Estimate File No. 8530 DWP2-007A. This estimate was completed in FY 2000, and costs have been escalated at an average rate of 3% per year to 2004 dollars. It was assumed no ICDF costs would be charged to the project. FY 2000 \$432,597. 100.00% \$486,892 \$0 \$486,892 Other Cost Subcontract \$10,000.00 \$10,000 \$0 S Unit Cost Cost Ş \$0 S Material Unit Cost Cost 80 **\$** Equipment Hourly Rate 8 Cost Equip Hours ŝ 8 ŝ Hourly Rate Cost Labor 0 Resource Qty UOM Hours 1.00 Project ဗ 9. Basin Water Removal To ICDF Evaporation Pond 1.00 ICP INEEL Equipment & Labor For Loading and Off Loading Materials $\label{eq:construct} i.o0 \quad \textit{ICP} \\ \text{Design \& construct pipe line, includes pump costs for 2}$ Description Contractor months Memo: Code 504

55	Basin Grouting With Rapid Water Removal Basis of Estimate: Estimate is based on Estimate File No. 2361-D cost are represented in FY-04 dollars.	ite File No. 23	61-D cos	0 t are repres	\$0 ented in FY-04 dollars.	0\$	0\$	0\$	\$585,398	\$585,398
27	1.00 ICP Concrete Placement	1.00	รา		0\$	O\$	O \$4	0\$	100.00% \$585,398	\$585,398
92	Earth Cap Over Building Foot Print Purchase & Haul Low - Permeability Soil Layer		3,	3,029	\$111,690	\$98,040	\$218,159	0\$	\$124,216	\$552,106
2	1.00 DIRT Purchase Low Permeability Soil Memo: Assume soil will be imported from an off-Site source.	6,774.00	Շ		0 \$	9	\$31.50 \$213,381	0 \$	29.03% \$61,945	\$275,326
80	1.00 DIRT CN-EQMD	6,774.00	≿	4	\$36.78 \$1,495	\$677	9	0 \$	29.03% \$631	\$2,803
G.	1.00 DIRT CN-TRHV Teamster & Belly Dump Memo: Assume 4 Hr. for round trip with 20 cubic yard belly dump.	6,774.00	≿	1,355	\$36.34 \$49.233	\$35,225	0\$	0\$	29.03% \$24,518	\$108,976

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Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives Opitons 2, 3, 4, 5 Project Location: INEEL I INTEC Estimate Number: 2731-8

:				<u>s</u> à	Labor	5	Labor Hourly Rate	Equip Hours	Equipment Houry Rate	Material Unit Cost	Subcontract Unit Cost	Other % Gost	TOTAL
# #!	Code	Contractor	Kesource Quy DOM	SI SI			1800	emon		1600			
Ç.	1.00 Operator & Water Wagon	DIRT	CN-EQMD	6,774.00	Շ	4	\$36.78 \$1,495		\$1,016	0\$	0\$	29.03% \$729	\$3,240
67	1.00 Operator & Motor Grader	DIRT	CN-EQMD	6,774.00	Շ	4	\$36.78 \$1,495		\$1,761	0\$	0\$	29.03% \$945	\$4,201
્યું	1.00 Operator & Compactor	DIRT	CN-EQMD	6,774.00	Շ	14	\$36.78 \$1,495		\$1,016	O \$	O\$	29.03% \$729	\$3,240
82	1.00 Grade Checker	DIRT	CN-SURR	40.00	H Šį	40	\$34.68 \$1,387		0\$	0\$	0\$	29.03% \$403	\$1,790
25	1.00 Foreman & Pickup	DIRT	CN-GEN	80.00	Hrs.	80	\$45.00		0\$	0\$	0\$	29.03% \$1,045	\$4,645
86	Vegetated Soil Layer Basis of Estimate:	Layer	il will be impor	ted from an	1,5 on-Site s	1,391 e source at r	1,391 \$51,490 Assume this soil will be imported from an on-Site source at no cost to the subcontractor or project.	ibcontractor or	\$58,345 r project.	\$4,778	\$0	\$33,272	\$147,885

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Material Costs where applicable include Idaho State Sales Tax

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\$4,625

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Operator & Water Wagon

\$5,997

29.03% \$1,349

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\$2,514

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1.00 Operator & Motor Grader

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Operator & Loader

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\$110,212

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\$50,279

\$36.34 \$35,137

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Teamster & Belly Dump Memo: Assume 2 Hr. for round trip with 20 cubic yard belly dump.

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CN-TRHV

\$4,625

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Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

Detail Item Report

\$1,790 \$9,862 \$6,774 \$481,659 TOTAL Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM 29.03% \$403 29.03% \$2,219 29.03% \$1,524 \$50,143 Other Subcontract Unit Cost \$0 \$ \$0 ŝ Cost \$27.30 ဒ္ဓ 8 \$0 Material Unit Cost Cost \$935 S \$750 \$ Equipment Hourly Rate Cost Equip Hours \$34.68 \$1,387 \$36.78 \$1,931 \$45.00 \$4,500 \$431,516 Labor Hourly Rate Cost 23 5 8,292 Resource Qty UOM Hours 175.00 M. S. F Ŧ. Ę 40.00 100.00 CN-EQMD CN-SURR CN-GEN Project Management & Support Description Contractor DIRT DIRT DIRT 1.00 9. 1.00 Allowance for seeding Foreman & Pickup

Grade Checker

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Code

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\$126,595	\$82,085	\$110,851	\$16,436	\$51,118	\$42,411	\$20,194	800'6\$
0\$	0\$	65.00% \$43,669	65.00% \$6,475	9	0\$	0	0\$
0\$	O\$	9	0 \$	0\$	0\$	0\$	\$0
0\$	0\$	0\$	\$0	\$0	\$0	\$0	\$0
0\$	\$0	0\$	0\$	0\$	\$0	9	0\$
\$72.34 \$126,595	\$48.62 \$85,085	\$38.39 \$67,183	\$56.92 \$9,961	\$58.42 \$51,118	\$48.47	\$46.21 \$20,194	\$52.99 \$9,008
1,750	1,750	1,750	175	875	875	437	170
Year	Year	Year	Year	Year	Year	Year	Year
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
E28	X12	U60-INL	Z08-INL	E19	808	P44	F22
E28 1.00 ICP PROJ MGMNT - ENGINEERING/SCIEN 1 FTE	X12 1.00 ICP ENVIRONMENTAL RESTORATION	U60-INL 1.00 7800-7632 RADIOLOGICAL CONTROL TECH		2 E19 1.00 ICP SAFETY ENGINEERING	, S08 1.00 ICP INDUSTRIAL HYGIENE	PLANNING AND CONTROLS	7 F22 1.00 ICP COST ESTIMATING
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Material Costs where applicable include Idaho State Sales Tax

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Material Costs where applicable include Idaho State	Page No.

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1.00 Project

1.00 ICP Allowance for on Site INEELsupport (temporary light, air and flush water)

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08/31/2004 INEEL

Detail Item Report

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL / INTEC
Estimate Number: 2731-8

Client: B. T. Richards
Prepared By: D. T. Peterson I R. R. Honsinger
Estimate Type: PlanningIROM

Code Description Contractor	n <u>Çontractor</u>	Resource	Qty U	La UOM Ho	Labor Hours	Labor Hourly Rate Cost	Equip <u>Hours</u>	Equipment Houny Rate Cost	Material Unit Cost Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
A14 1.00 SECRETARIAL	ICP	A14	1.00	Year	350	\$23.05 \$8,068		9	0 \$	9	\$	\$8,068
P21 1.00 SUBCONTRACT ADMIN	ЮР	P21	1.00	Year	160	\$74.34		0\$	\$	9	0\$	\$11,894
S&M Costs				12,	12,800	\$470,080		80	\$0	80	\$280,414	\$750,494
U60-INL 1.00 7800-7632 U60-IN RADIOLOGICAL CONTROL TECH (Monitoring & surveillance)	7600-7632 TECH (Monitoring & sur	U60-INL veillance)	20.00	Years	3,200	\$38.39 \$122,848		0\$	0\$	0\$	65.00% \$79,851	\$202,699
116-INL INDUST SAFETY/HEALTH TECH(Monitoring & surveillance)	7100-7350 ECH (Monitoring & surv	T15-INL eillance)	20.00	Years	3,200	\$32.22 \$103,104		0\$	\$	0\$	65.00% \$67,018	\$170,122
F21-INL 1.00 OTHER FACILITY SERVICES	5M00-5M9B S	U29-INL	20.00	Years	3,200	\$35.88 \$114,816		0 \$	\$	0\$	60.00% \$68,890	\$183,706
F28-INL 1.00 SECURITY COORDINATORS	P000-P230 S	F28-INL	20.00	Years	3,200	\$40.41 \$129,312		0\$	\$0	\$0	50.00% \$64,656	\$193,968
OPTION 4				28,	28,827	\$1,884,318		\$98,040	\$454,409	\$1,550,350	\$1,585,343	\$5,572,460
Sludge Removal Basis of Estimate:	oval	ed on vendors q	sote (Dura	tek) to rei	0 move, soll	\$0 diffication and on	Site disposal	0 \$0 Costs are based on vendors quote (Duratek) to remove, solidification and on Site disposal of sludge. (March 24, 2004)	\$0 \$24, 2004)	\$1,550,350	9	\$1,550,350
1.00 ICP Sludge Removal, solidification, and on Site disposal of sludges	ICP Nand on Site disposal of		1.00	รา		0\$		0\$	0\$	\$1,520,350.00 \$1,520,350	0\$	\$1,520,350

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives
Options 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

TOTAL	\$10,000	\$10,000
Other % Cost	0\$	0 \$
Subcontract Unit Cost Cost	\$10,000.00 \$10,000	\$10,000.00 \$10,000
Material Unit Cost Cost	0\$	9
Equipment Hourly Rate Cost	0\$	0\$
Equip <u>Hours</u>		
Labor Hourly Rate Cost	0\$	%
Labor Resource Qtv_UOM_Hours	1.00 Project	1.00 Project
# Code Description contactor R	1.00 ICP ICP Allowance for Subcontractors PPEs	11.00 ICP INEEL Equipment & Labor For Loading and Off Loading Materials

\$33,208 \$930,678	es. Assume Ibs. of smaller	\$0 \$97,680 boxes for	
\$0 \$3:	of big items, and 1250 is	\$0 ded into 4x4x6 waste t. g.	
\$236,250	ssume North Basin with th Basin with 8,000 lbs o	\$10,080 . or less and will be loa 8 days for work plannin	
\$0	s or less). A Assume Sour	*,/. \$0 II item 20 lbs c removal, &	
640 \$661,220	Assumes a total of 10,000 ibs of debris. 8,000 lbs. of big pieces and 2,000 ib of small pieces (20lbs or less). Assume North Basin with 250 lbs. of small pieces. Assume Transfer Canal with 250 lbs. of small pieces. Assume Transfer Canal with 250 lbs. of smaller bisces. Assumes structural racks and structural mamahars are comoved from basins for unknown.	Removal Removal Assumes the D-Racks will be removed. Assume the misc. debris removal, 8 days for D Rack removal, 8 8 days for work planning.	
Debris Removal	Basis of Estimate: Assumes a total of 10,000 lbs of debris. 8,000 Middle Basin with 250 lbs. of small pieces. A pasimes structural racks and struct	North Basin - Debris Removal Basis of Estimate: Assumes the D-Racks will be racks will be racks will be racks.	

117

3118

1.00 1CP							
Remove misc small debris -250 lbs, 480 hours	1.00 lot	\$28,800	0\$	0\$	0 %	0\$	\$28,800
1.00 ICP Material - waste boxes	2.00 ea	0\$	0\$	\$840.00 \$1,680	0 \$	0 \$	\$1,680
1.00 ICP Material - PPE, tools	16.00 days	O 49	0\$	\$525.00 \$8,400	0 \$	0 \$	\$8,400
1.00 ICP Transport to RWMC	2.00 boxes	\$6,000	0\$	0	0	0\$	\$6,000
1.00 ICP Work Planning	4.00 WO	\$24,000	0 \$	0 \$	0\$	0\$	\$24,000
1.00 ICP Remove D Racks - 8 Days 480 Hrs.	1.00 LS	\$28,800	0\$	\$	\$	°	\$28,800

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL / INTEC
Estimate Number: 2731-8

Client: B. T. Richards
Prepared By: D. T. Peterson I R. R. Honsinger
Estimate Type: Planning/ROM

TOTAL	\$81,180
Other % Cost	\$0
Subcontract Unit Cost Cost	0\$
Material Unit Cost Cost	\$7,980 le <i>D-racks.</i>
Equipment Hourly Rate Cost	\$0 9 1/2 the effort of the D-rack
Equip Hours	is assumed to be 1/
Labor Hourly Rate Cost	\$73,200 I debris removal is
Labor UOM Hours	0 except the structura
Ott	Basin,
Resource Qtv UOM	ne effort as North
Contractor	Middle Basin - Debris Removal sis of Estimate: Assume same effort as North Basin, except
Description Contactor	Middle Basin - Basis of Estimate:
# Code	125

1.26 1.00 ICP Remove misc small debris -250 lbs, 480 hours	ICP -250 lbs, 480 hours	1.00	oţ	\$28,800	0\$	0\$	0\$	0\$	\$28,800
1.00 Material - waste boxes	dOl	2.00	683	0\$	0\$	\$840.00 \$1,680	0\$	0\$	\$1,680
1.00 Material - PPE, tools	ICP	12.00	days	0\$	0\$	\$525.00 \$6,300	0\$	0\$	\$6,300
1.00 Transport to RWMC	OP	2.00	boxes	\$6,000	0 \$	0\$	0 *	\$0	\$6,000
130 1.00 Work Planning	OP	4.00	wo	\$24,000	0\$	0\$	\$0	0\$	\$24,000
1.00 ICP Remove Miscellaneous Structural 4 Days 240 Hrs.	1.00 ICP Structural 4 Days 240 Hrs.	1.00	গ্ৰ	\$14,400	\$0	0\$	\$0	0\$	\$14,400
اج South Basin - ا Basis of Estimate:	Debris	is to remove,	0 size, and place into c	Removal \$0 \$204,750 \$0 \$0 Assume 8000 ib of large items to remove, size, and place into cargo containers (sea vans) for disposal as LLW at RWMC. Assume 1000 lips of hinh rad waste currentiv in 2	\$0 \$1 \$8 LLW at RWI	\$204,750 /MC. Assume 1000 lbs.c	\$0 Shich rad waste	\$0	\$557,638

\$557,638	\$158,000
\$0 ite currently in 2 ictural debris to	\$ 0\$
\$0 lbs of high rad was is of racks and stru	0\$
\$204,750 VMC. Assume 1000 IC. Assume 4,000 It	0\$
\$0 disposal as LLW at RV boxes as LLW at RWN	0\$
Removal 40 \$204,750 \$0 4ssume 8000 ib of large items to remove, size, and place into cargo containers (sea vans) for disposal as LLW at RWMC. Assume 1000 ibs of high rad waste currently in 2 ea hot waste boxes. Assume 250 ibs. of misc small item on floor of canal to dispose in waste boxes as LLW at RWMC. Assume 4,000 ibs of racks and structural debris to be removed and loaded into cargo containers.	\$158,000
Removal Assume 8000 lb of large Items to remove, size, and place ea hot waste boxes. Assume 250 lbs. of misc small Iten be removed and loaded Into cargo containers.	8,000.00 lbs
South Basin - Debris Removal Basis of Estimate: Assume 8000 Ib of larg ea hot waste boxes. A be removed and loadee	1.00 1CP Remove, Size, & dispose of Large Items 8,000.00 lbs \$158,000 80 \$0 \$0 \$0 \$0 \$0
132	733 Remove Memor

\$158,000	\$39,450
\$0	\$0 r at 3 X the
\$0 asin water conditions.	\$0 R canal. Assume labo
\$0 accessibility, cloudy b	\$0 3 casks, as used at MT
\$0 bosure and concerns,	\$0 :NS-1-13-II-C shipping
lbs \$158,000 \$0 \$0 (MTR debris removal at \$13.15/lb ave.) due to rad exposure and concerns, accessibility, cloudy basin water conditions.	lbs \$39,450 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 one tubed into the CNS-1-13-II-C shipping casks, as used at MTR canal. Assume labor at 3 X the one items is estimated at 200R to 300R. Confirm.
lbs (MTR debris ก	lbs s used at MTR come items is e
8,000.00 oris removal MTR canal	1,000.00 into the cask baskets a own, and rad levels of s
Kemove, Size, & dispose of Large liems Memo: Assume cost to be 1.5 times the actual cost for debris removal MTR canal (1394 Remove HIGH RAD Waste from waste boxes Remove HIGH RAD Waste from waste boxes Nemo: Assume removal of existing hot waste box contents into the cask baskets as used at MTR canal. Cask Baskets loaded into the average MTR canal. Cask Baskets loaded into the average MTR cost. Location of existing boxes is known, and rad levels of some items is estimated at 200R to 300R. Confirm.

INEEL

Project Name: CPP-603 EEICA Alternatives Opitons 2, 3, 4, 5 Project Location: INEEL | INTEC Estimate Number: 2731-8

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

TOTAL	\$52,500	\$52,500	\$16,438	\$15,750	\$84,000	\$60,000	\$79,000	\$105,360	\$57,600	\$3,360	\$8,400
10											
Other % Cost	0\$	0\$	0\$	9	9	0\$	\$0	O\$	9	\$0	0\$
Subcontract Unit Cost Cost	0\$	0\$	9	0\$	\$0	0\$	0\$	0\$	9	%	9
Material Unit Cost Cost	\$26,250.00 \$52,500 om MTR Canal.	\$52,500.00 \$52,500	0 \$	\$15,750.00 \$15,750	\$1,050.00 \$84,000	0\$	0\$	\$11,760	0 \$	\$840.00 \$3,360	\$525.00 \$8,400
Equipment Hourly Rate Cost	\$0 sts that are unused fr	\$	0\$	%	9	0\$	0\$	O\$	0\$	9	0\$
Equip Hours	se of cask bask		od of retrieval.								
Labor Hourly Rate Cost	\$0 pection. Assume u	0	\$16,438 and unknown meth	9	0\$	\$60,000	\$79,000	\$93,600	\$57,600	0\$	9
Labor Hours	cation/ins	MTR is available.	ıd levels,					•			
L LOM H	ring/fabrik	at MTR is	lbs ıknown ra		days	WO	Lbs.	геточе.	<u> 5</u>	99	days
Oth	2.00 r enginee	1.00 ask used	250.00 ations, un	1.00	80.00	10.00	4,000.00	ebris to	1.00	4.00	16.00
Resource	\$26,250.0	1.00 /CP - Shipping cask Allowance of \$50,000. Confirm with H. Heidkamp if shipping cask used at	1.00 ICP Remove misc small items from canal floor Memo: Assume labor at 5 X the average MTR cost due to unknown locations, unknown rad levels, and unknown method of retrieval.				4	al Assume 500 lbs of misc small debris to remove.		,	
Contractor	the cost	nfirm with	l floor erage MT	sexoc				oval	960 hours		
	ICP oporx. 1/2	100 Co	ICP om cana X the av	ICP & waste t	ICP pplies	OD D	JCP _	oris Rem ate:	<i>ICP</i> 500 lbs,	ICP	ICP
Description	1.00 Material - Cask Baskets Memo: Assume cost at ap	1.00 Material - Shipping cask Memo: Allowance of \$50,(1.00 misc small items fr Assume labor at 5	1.00 ICP Material - cargo containers & waste boxes	1.00 // Material - PPE and misc supplies	1.00 nning	1.00 Remove Racks & Structural	Canal - Debris Removal Basis of Estimate: As	1.00 ICP Remove misc small debris -500 lbs, 960 hours	1.00 Material - waste boxes	1.00 Material - PPE, tools
Code	Material Memo:	Material - Memo:	Remove Memo:	Material -	Material -	Work Planning	Remove		Remove r	Material -	Material -
#1	13.5	3	5% 575 376	138	139	140	147	<i>3</i> #1	4	4	245

INEEL

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Estimating Services Department

Material Costs where applicable include Idaho State Sales Tax Page No. 13

					Labor		Equipment	Material	Subcontract	Other	
Description confractor Re	Resource	Otty U	Labor UOM Hours	Labor Hours	Hourly Rate Cost	Equip Hours	Hourly Rate	Unit Cost	Unit Cost	% Cost	۲۹
1.00 ICP . Dort to RWIMC		4.00	4.00 boxes		\$12,000		0\$	0\$	0\$	0\$	
1.00 ICP Planning		4.00	wo		\$24,000		0\$	0\$	0\$	0\$	
Engineering and Remote Tool Development	ent			640	\$53,933		0\$	\$1,680	0\$	\$33,208	
1.00 4600 E3	E38-INL	640.00	hours	640	\$61.77 \$39,533		0\$	0\$	0\$	84.00% \$33,208	
1.00 ICP nd test tools : Assume 3 men per day.		8.00	days		\$14,400		0	\$210.00 \$1,680	0\$	\$0	
Basin Water Removal To ICDF Evaporation Pond	oration Pon	o		0	0\$		\$0	0\$	0\$	\$486,892	
1.00 ICP R. construct pipe line, includes pump costs for 2		1.00	ĽS		0\$		0\$	0\$	0\$	100.00% \$486,892	
Costs are based on Estimate File No. 8530 DWP2-007A. This estimate was completed in FY 2000, and costs have been escalated at an average rate of 3% per year to 2004 dollars. It was assumed no ICDF costs would be charged to the project. FY 2000 \$432,597.	-007A. This es 7.	timate w	as comp	leted in FY 2	000, and costs ha	ve been escala	ited at an average ra	ite of 3% per year to	2004 dollars. It was a	ssumed no ICDF co	sts
Basin Grouting With Rapid Water Removal Basis of Estimate: Estimate is based on Estimate File No. 2361-D cost are represented in FY-04 dollars.	emoval on Estimate F	ile No. 2	361-D cc	0 ost are repre	\$0 sented in FY-04	dollars.	0\$	0\$	0\$	\$585,398	"
1.00 ICP		1.00	รา		0\$		0\$	0\$	\$	100.00%	97
Earth Cap Over Building Foot Print			~,	3,029	\$111,690		\$98,040	\$218,159	0\$	\$124,216	

137

\$12,000

TOTAL COST

Client: B. T. Richards
Prepared By: D. T. Peterson I R. R. Honsinger
Estimate Type: Planning/ROM

Detail Item Report

Project Name: CPP-603 EEICA Alternatives Opitons 2, 3, 4, 5 Project Location: INEEL INTEC Estimate Number: 2731-8

Code

Transport to RWMC

954

Work Planning

-

\$88,820

\$24,000

\$16,080

\$486,892

\$486,892

1.00 ICP Design & construct pipe line, includes pump costs for 2

250

Memo: months

\$585,398

25

\$585,398

Concrete Placement

154

155

\$552,106

Material Costs where applicable include Idaho State Sales Tax

Estimating Services Department

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08/31/2004

INEEL

\$72,740

45

Allowance for remote tooling engineering

Memo: Assume 3 men per day.

Fab and test tools

150

148

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Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL / INTEC
Estimate Number: 2731-8

Client: B. T. Richards
Prepared By: D. T. Peterson | R. R. Honsinger
Estimate Type: Planning|ROM

ı	12	56	33	92	9	π		0(स् १	<u>82</u> 1	<u> </u>
TOTAL	\$404,221	\$275,326	\$2,803	\$108,976	\$3,240	\$4,201	\$3,240	\$1,790	\$4,645	\$147,885	\$4,001
Other % Cost	\$90,944	29.03% \$61,945	29.03% \$631	29.03% \$24,518	29.03% \$729	29.03% \$945	29.03% \$729	29.03% \$403	29.03% \$1,045	\$33,272	29.03% \$900
Subcontract Unit Cost Cost	\$0	0\$	6 €	0\$	9	0\$	9	9	0\$	0\$	0\$
Material Unit Cost Cost	\$213,381	\$31.50 \$213,381	9	9	0\$	0 \$	0\$	0 \$	0 \$	\$4,778	0\$
Equipment Hourly Rate Cost	\$39,696	O \$	\$677	\$35,225	\$1,016	\$1,761	\$1,016	0\$	0\$	\$58,345 or project.	296\$
Equip Hours										ubcontractor	
Labor Hourly Rate Cost	\$60,200	0\$	\$36.78 \$1,495	\$36.34 \$49,233	\$36.78 \$1,495	\$36.78 \$1,495	\$36.78 \$1,495	\$34.68 \$1,387	\$45.00 \$3,600	\$51,490 t no cost to the si	\$36.78 \$2,134
bor	1,637		4	1,355	14	14	4	40	88	,391 source a	58
OM H G	Ì	Շ	≿	Շ	≿	≿	₽	Ŧ S	H S.	n on-Site	₹
Labor Qty UOM Hours		6,774.00	6,774.00	6,774.00	6,774.00	6,774.00	6,774.00	40.00	80.00	rted from a	9,669.00
Resource	Purchase & Haul Low - Permeability Soil Layer	in off-Site source.	CN-EQMD	1.00 DIRT CN-TRHV r.& Belly Dump Assume 4 Hr. for round trip with 20 cubic yard belly dump.	CN-EQMD	CN-EQMD	CN-EQMD	CN-SURR	CN-GEN	1,391 \$51,490 Assume this soil will be imported from an on-Site source at no cost to the subcontractor or project.	CN-EQMD
Contractor	aul Low - Per	DIRT ported from a	DIRT	<i>DIRT</i> d trip with 20	DIRT	DIRT	DIRT	DIRT	DIRT		DIRT
Description Contractor	Purchase & Ha	1.00 DIRT Purchase Low Permeability Soil Memo: Assume soil will be imported from an off-Site source.	1.00 Operator & Loader	1.00 Teamster & Belly Dump Memo: Assume 4 Hr. for rounc	1.00 Operator & Water Wagon	1.00 Operator & Motor Grader	1.00 Operator & Compactor	1.00 ker	1.00 Pickup	Vegetated Soil Layer Basis of Estimate:	1.00
1		ase Lo : Ass	tor & L	ter&l	for & V	tor & N	ior & C	Grade Checker	an & F	6	or & L
Code	156	Purchi Memo	158 Opera	759 Teamste Memo:	160 Opera	161 Opera	१६२ Operal	753 Grade	164 Foreman & Pickup	165	186 Operator & Loader

INEEL

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Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL / INTEC
Estimate Number: 2731-8

#1	Code Description 5	Contractor	Resource	Qty U	Labor UOM Hours	Labor	Labor Hourly Rate Cost	Equip <u>Hours</u>	Equipment Hourly Rate Cost	Material Unit Cost Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
167	1.00 Teamster & Belly Dump Memo: Assume 2 Hr. for rounc	<i>DIRT</i> 1 trip with 20 cubic yard be	CN-TRHV elly dump.	9,669.00	⋩	296	\$36.34 \$35,137		\$50,279	0\$	0\$	29.03% \$24,796	\$110,212
68	1.00 Operator & Water Wagon	DIRT	CN-EQMD	9,669.00	Շ	28	\$36.78 \$2,134		\$1,450	0\$	O \$	29.03% \$1,040	\$4,625
691	1.00 Operator & Motor Grader	DIRT	CN-EQMD	9,669.00	ζ	28	\$36.78 \$2,134		\$2,514	0\$	0\$	29.03% \$1,349	\$5,997
170	1.00 Operator & Compactor	DIRT	CN-EQMD	9,669.00	≿	28	\$36.78 \$2,134		\$1,450	0\$	0\$	29.03% \$1,040	\$4,625
Pro- Pro- Pro-	1.00 Grade Checker	DIRT	CN-SURR	40.00	H s.	40	\$34.68 \$1,387		9	9	0\$	29.03% \$403	\$1,790
22	1.00 Allowance for seeding	DIRT	CN-EQMD	175.00 M.	M. S. F	83	\$36.78 \$1,931		\$935	\$27.30 \$4,778	0\$	29.03% \$2,219	\$9,862
(7) (2)	1.00 Foreman & Pickup	DIRT	CN-GEN	100.00	캶	100	\$45.00		\$750	0\$	0\$	29.03% \$1,524	\$6,774
25		Project Management & Support			12,	12,358	\$641,327		\$0	0\$	\$0	\$75,215	\$716,542
175	E28 PROJ MGMNT - ENGINEERIN(icp S/SCIEN 1 FTE	E28	1.50	Year	2,625	\$72.34 \$189,893		0\$	0\$	0\$	0\$	\$189,893
176	X12 ENVIRONMENTAL RESTORAT	<i>ICP</i> ION	X12	1.50	Year	2,625	\$48.62 \$127,628		0\$	0\$	0\$	0\$	\$127,628
177	U60-INL 1.00 RADIOLOGICAL CONTROL TE	7600-7632 CH	Neo-INI	1.50	Year	2,625	\$38.39 \$100,774		0\$	0\$	0\$	65.00% \$65,503	\$166,277
178	208 SUPERVISOR, OPERATIONS	7600-7632	Z08-INL	1.50	Year	263	\$56.92 \$14,942		0\$	0 \$	\$0	65.00% \$9,712	\$24,653
80	INEEL 08/31/2004 10:01:55					Estima	Estimating Services Department	Departmen	·	Material Costs	Material Costs where applicable include Idaho State Sales Tax Page No. 16	nclude Idaho State Page No.	Sales Tax 16

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08/31/2004 INEEL

Material Costs where applicable include Idaho State Sales Tax Page No. 17

Estimating Services Department

Detail Item Report

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

Subcontract Other Unit Cost % TOTAL Cost Cost COST	\$0 \$0,976,676	\$0 \$03,617	\$0 \$0 \$0	}	9 9	S 9 9	\$ 0 \$ \$	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	\$0 \$0 \$0 \$0 \$13.414 \$	\$0 \$0 \$0 \$280,414 \$ \$79,851 \$ \$779,851 \$	\$0 \$0 \$0 \$280,414 \$ \$79,851 \$ \$65,00% \$67,018 \$	\$0 \$0 \$0 \$280,414 \$ \$79,851 \$ \$67,018 \$ \$67,018 \$ \$64,656 \$
	0\$	0\$	0\$ 0\$	C#								
Cost	\$0	0\$	0\$	Ş	9	g, g,	9 9 9 1	05 05 05 05 05	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	S S S S S
Equip Hours												
Hourty Rate	\$58.42 \$76,676	\$48.47 \$63,617	\$46.21 \$30,291	\$52.99 \$13,512		\$23.05 \$12,101	\$12,101 \$12,101 \$74.34 \$11,894	\$12,101 \$12,101 \$74.34 \$11,894	\$12,101 \$74.34 \$11,894 \$470,080 \$333.39	\$23.05 \$12,101 \$74.34 \$11,894 \$470,080 \$32.22 \$122,848 \$122,848	\$12,101 \$74.34 \$11,894 \$470,080 \$38.39 \$122,848 \$32.22 \$103,104 \$35.88 \$114,816	\$12,101 \$74.34 \$11,894 \$122,848 \$122,848 \$122,848 \$122,848 \$129,312 \$10.41 \$129,312
Labor JOM Hours	1,313 Year	1,313 ·Year	656 Year	255 Year		525 Year		12,80	3,	12 80 ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	12 15 m m m m m m m m m m m m m m m m m m	08 ਲੰ ਲੰ ਲੰ 21
e Qty UO	1.50	1.50	1.50	1.50		1.50	1.50	1.50	1.50 Year	1.50		
Resource	E19	808	P44	F22		A14	A14	A14	A14 P21 U60-INL wing & surveillance)	A14 P21 U60-INL ring & surveillance) T15-INL	P21 U60-INL ring & surveillance) T15-INL ing & surveillance)	P21 U60-INL ring & surveillance) T15-INL Ing & surveillance) T29-INL
tion Contractor	0 ICP	o ICP	o ice	O ICP		O ICP	ŀ		### 1CP CCP Sts 7800-7832 CCP CC	sts 7600-7632 DL TECH (Monitori	sts 7600-7632 DL TECH (Monitor) 7700-7350 1 TECH (Monitor)	sts 1CP 1CP 1 TECH (Monitori 1 7100-7350 1 TECH (Monitori 1 7100-7360 1 TECH (Monitori 1 5M00-5M9B 1 5M00-6M9B
Code Description	E19 1.00 SAFETY ENGINEERING	S08 INDUSTRIAL HYGIENE	P44 1.00 PLANNING AND CONTROLS	F22 1.00 COST ESTIMATING		A14 1.00 SECRETARIAL	ADM	ADM S&M	SECRETARIAL 1.00 ICP A14 P21 1.00 ICP P21 SUBCONTRACT ADMIN U60-INL 1.00 7600-7632 U60-IN RADIOLOGICAL CONTROL TECH (Monitoring & surveillance)	SECRETARIAL P21 P21 SUBCONTRACT ADMIN U60-INL 1.00 7600-7632 U60-II S&M Costs SAM Costs T16-INL T16-INL 1.00 7100-7350 T15-IN INDUST SAFETY/HEALTH TECH (Monitoring & surveillance)	SECRETARIAL P21 1.00 SUBCONTRACT ADMIN U60-INL RADIOLOGICAL CONTROL T T16-INL INDUST SAFETY/HEALTH TE F21-INL T76-INL T76-INL T76-INL T76-INL T76-INL T76-INL T76-INL T76-INL T700 T76-INL T700 T700	SECRETARIAL P21 1.00 SUBCONTRACT ADMIN U80-INL S&M Costs S&M Costs 1.00 T16-INL I100 INDUST SAFETY/HEALTH TE F21-INL OTHER FACILITY SERVICES F28-INL SECURITY COORDINATORS
⊘	9779 S	180 180	<u>a</u>	٥ (ه)		183 S I						

Project Name: CPP-603 EEICA Atternatives Opitons 2, 3, 4, 5 Project Location: INEEL / INTEC Estimate Number: 2731-8

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8

Client: B. T. Richards
Prepared By: D. T. Peterson I R. R. Honsinger
Estimate Type: Planning/ROM

\$486,892 \$486,892 TOTAL Cost are based on Estimate File No. 8530 DWP2-007A. This estimate was completed in FY 2000, and costs have been escalated at an average rate of 3% per year to 2004 dollars. It was assumed no ICDF costs would be charged to the project. FY 2000 \$432,597. 100.00% \$486,892 \$486,892 Other Cost Subcontract \$ S Unit Cost Cost \$0 ಜ್ಞ Material Unit Cost Cost 8 ç \$ Equipment Hourly Rate Cost Equip Hours 8 Ş Labor Hourly Rate Cost 0 UOM Hours S 1.00 Resource Qty Basin Water Removal To ICDF Evaporation Pond $1.00~{\it ICP}$ Design & construct pipe line, includes pumps costs for 2 Description Contractor Memo: # Code

183	Sludge Removal		·	0	90	\$0	\$0	\$1,550,350	\$0	\$1,550,350
segpn s Sludge l	1.00 ICP Nudge Removal, solidification, and on Site disposal of sludges	N e disposal of	1.00 LS		05	\$	0\$	\$1,520,350.00 \$1,520,350	9	\$1,520,350
198 Allowan and flus	1.00 ICP Allowance for on Site INEELsupport (temporary light, air and flush water)	orary light, air	1.00 Project		0\$	0\$	0	\$10,000.00 \$10,000	0 %	\$10,000
196 Allowan	1.00 ICP Allowance for Subcontractors PPEs		1.00 Project		0\$	0 \$	0\$	\$10,000.00 \$10,000	\$0	\$10,000
ineel Ec Materials	1.00 ICP INEEL Equipment & Labor For Loading and Off Loading Materials	id Off Loading	1.00 Project		O \$	2 0	0\$	\$10,000.00 \$10,000	0\$	\$10,000
198	Debris Removal Basis of Estimate: As	Assumes a total of 10,000 lbs of debris. 8,0 Middle Basin with 250 lbs. of small pieces pieces. Assumes structural racks and struc	6 debris. 8,000 lbs. (all pieces. Assume ks and structural m	\$66 . of big pieces and ne Transfer Canal	\$0 \$236,250 \$33,208 \$33,208 \$661,220 \$850,220 \$850,220 \$10,000 \$10,000 \$236,250 \$10 \$20 \$33,208 \$33,20	\$0 or less). Assume sume South Basi	\$236,250 ne North Basin w isin with 8,000 lb	\$0 vith 250 lbs. of small bs of big items, and	\$33,208 pleces. Assun 1250 lbs. of smë	\$930,678 e ller

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\$97,680

Assumes the D-Racks will be removed. Assume the misc. debris in north basin to be mainly small item 20 lbs. or less and will be loaded into 4x4x6 waste boxes for disposal to RWMC. Assume 6 man crew. Allow 8 days for misc. debris removal, 8 days for D Rack removal, 8 8 days for work planning.

North Basin - Debris Removal

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Basis of Estimate:

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives Opitons 2, 3, 4, 5 Project Location: INEEL I INTEC Estimate Number: 2731-8

\$28,800 \$1,680 \$8,400 \$24,000 \$6,000 \$28,800 \$81,180 į TOTAL COST 8 **\$** ç Ç င္တ \$0 \$ Other % Cost Subcontract Unit Cost Ş Ş င္တ င္အ ಜ್ಞ ŝ ន Cost \$840.00 ಽ \$525.00 \$8,400 Ç S Ş Removal \$0 \$7,980 \$7,980 Srsume same effort as North Basin, except the structural debris removal is assumed to be 1/2 the effort of the D-racks. Material Unit Cost Cost ŝ Ş င္တ S S S Equipment Hourly Rate Cost Equip Hours \$6,000 \$24,000 Ş Ş \$28,800 \$28,800 Labor Hourly Rate Cost Resource Qty UOM Hours days ಠ ea boxes Š മ 2.00 9. 16.00 1.00 2.00 4.00 Middle Basin - Debris Removal Basis of Estimate: Assume s 1.00 ICP Remove misc small debris -250 lbs, 480 hours Description Contractor 1.00 ICP Remove D Racks - 8 Days 480 Hrs. õ Ŝ õ õ 1.00 1.00 1.00 Material - waste boxes Material - PPE, tools Transport to RWMC Work Planning Code 200 102 202 202 204 205 206

1.00 ICP Remove misc small debris -250 lbs, 480 hours	1.00 lebris -25	<i>ICP</i> 50 lbs, 480 hours	1.00	<u>o</u> t	\$28,800	0\$	0 \$	0\$	\$0	\$28,800
208 Material - waste boxes	1.00 ICP	Ю	2.00	88	0 \$	0\$	\$840.00 \$1,680	0\$	0\$	\$1,680
२७५ Material - PPE, tools	1.00	OP	12.00	days	0 9	0\$	525.00 16,300	\$0	\$0	\$6,300
210 Transport to RWMC	1.00	lCP	2.00 b	boxes	000'9\$	% 0	0	0\$	0 \$	\$6,000
211 Work Planning	1.00	ICP	4.00	WO	\$24,000	0\$	0\$	\$0	\$0	\$24,000
INEEL										

Material Costs where applicable include Idaho State Sales Tax

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Estimating Services Department

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08/31/2004

Client: B. T. Richards
Prepared By: D. T. Peterson | R. R. Honsinger
Estimate Type: Planning|ROM

Project Name: CPP-603 EEICA Alternatives Opitons 2, 3, 4, 5 Project Location: INEEL I INTEC Estimate Number: 2731-8

\$557,638 \$14,400 TOTAL COST Removal
Assume 8000 ib of large items to remove, size, and place into cargo containers (sea vans) for disposal as LLW at RWMC. Assume 1000 ibs of high rad waste currently in 2 ea hot waste boxes. Assume 250 ibs. of misc small item on floor of canal to dispose in waste boxes as LLW at RWMC. Assume 4,000 ibs of racks and structural debris to be removed and loaded into cargo containers. \$ % Cost Other Ç Subcontract Unit Cost Ş Material Unit Cost \$ Equipment Hourly Rate Cost Equip Hours \$14,400 Hourly Rate Cost Labor Resource Qty UOM Hours ട്ട 1.00 1.00 ICP Remove Miscellaneous Structural 4 Days 240 Hrs. South Basin - Debris Removal Basis of Estimate: Description Contractor # Code () () 213

Remove, Size, & dispose of Large Items 8,000.00 lbs \$158,000 kg \$158,000 kg \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	8,000.00 is removal MTR cana	lbs il (MTR debris removal	\$158,000 at \$13.15/lb ave.) due to rad exposure a	\$0 nd concerns,	\$0 accessibility, cloudy basin	\$0 n water conditions.	0\$	\$158,000
Remove HIGH RAD Waste from waste boxes 1,000.00 ibs \$39,450 (399.00 ibs \$39,450 (200.00 ibs \$39,450 (200.00 ibs Assume removal of existing hot waste box contents into the cask baskets as used at MTR canal. Cask Baskets loaded into the average MTR cost. Location of existing boxes is known, and rad levels of some items is estimated at 200R to 300R. Confirm.	1,000.00 into the cask baskets in wm, and rad levels of	ibs as used at MTR canal. some items is estimate	\$39,450 \$0 \$0 \$0 \$0 \$0 \$0 \$ask Baskets loaded into the CNS-1-13-II-C shipping casks, as used at MTR canal. Assume labor at $3\times$ the d at 200R to 300R. Confirm.	\$0 3-II-C shipping	\$0 casks, as used at MTR c	\$0 anal. Assume labor	\$0 at 3 X the	\$39,450
\$56,250.0 (CP) (CP) (SP) (SP) (SP) (SP) (SP) (SP) (SP) (S	2.00 R canal for engineeri	ng/fabrication/inspectio	\$0 n. Assume use of cask baskets that are	\$0 unused from N	\$26,250.00 \$52,500 ATR Canal.	0\$	8 0	\$52,500
217 (1.00 ICP) Material - Shipping cask Material - Shipping cask Material - Shipping cask Wemo: Allowance of \$50,000. Confirm with H. Heidkamp if shipping cask used at MTR is available.	1.00 shipping cask used a	t MTR is available.	0%	0 \$	\$52,500.00 \$52,500	0\$	0\$	\$52,500
Remove misc small items from canal floor \$16,438 Remove misc small items from canal floor \$16,438 Memo: Assume labor at 5 X the average MTR cost due to unknown locations, unknown rad levels, and unknown method of retrieval.	250.00 nknown locations, unk	lbs rnown rad levels, and u	\$16,438 nknown method of retrieval.	9	0\$	0 \$	0 \$	\$16,438
1.00 ICP Material - cargo containers & waste boxes	1.00		0\$	%	\$15,750.00 \$15,750	99	0\$	\$15,750
220 1.00 ICP Material - PPE and misc supplies	80.00	days	0\$	0\$	\$1,050.00 \$84,000	0\$	0\$	\$84,000
221 1.00 1CP Vork Planning	10.00	WO	\$60,000	%	0\$	0\$	0 \$	\$60,000
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Material Costs where applicable include Idaho State Sales Tax

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Estimating Services Department

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Material Costs where applicable include Idaho State Sales Tax Page No. 21

Detail Item Report

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

Code	Description Contractor		Resource	Oţ	La UOM Ho	Labor Hours	Labor Hourly Rate Cost	Equip Hours	Equipment Hourly Rate Cost	Material Unit Cost Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
222 Remove	1.00 Remove Racks & Structural	ICP	·	4,000.00	Lbs.		\$79,000		0\$	80	0\$	\$	\$79,000
223	Canal - Debris Removal Basis of Estimate:	Removal Assume 500 lbs of misc small debris to remove.	f misc small o	debris to	гетоvе.	0	\$93,600		0\$	\$11,760	0\$	0\$	\$105,360
224 Remove	1.00 ICP Remove misc small debris -500 lbs, 960 hours	ICP Ibs, 960 hours		1.00	<u>o</u>		\$57,600		0\$	0\$	0\$	0\$	\$57,600
225 Material	1.00 Materiał - waste boxes	ICP		4.00	69		0\$		9	\$840.00 \$3,360	%	0\$	\$3,360
226 Material	1.00 Material - PPE, tools	ICP		16.00	days		0\$		0\$	\$525.00 \$8,400	9	9	\$8,400
227 Transpo	1.00 Transport to RWMC	lCP		4.00	poxes		\$12,000		%	O \$	0\$	\$	\$12,000
228 Work Planning	1.00 anning	ICP		4.00	ow O		\$24,000		%	\$	\$0	0\$	\$24,000
229	Engineering ar	Engineering and Remote Tool Development	nent			040	\$53,933		0\$	\$1,680	\$	\$33,208	\$88,820
230 Allowand	1.00 4600 Allowance for remota tooling engineering		E38-INL	640.00	hours	640	\$61.77 \$39,533		9	0\$	\$0	84.00% \$33,208	\$72,740
237 Fab and Memo:	1,00 II Fab and test tools Memo: Assume 3 men per day.	ICP y.		8.00	days		\$14,400		0\$	\$210.00 \$1,680	9	9	\$16,080
232	Basin Contai	Basin Containment For Air Borne Contaminaton	ontaminato	Ē	ģ	6,658	\$264,201		0\$	\$244,206	0\$	\$118,221	\$626,628

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Detail Item Report

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives Opitons 2, 3, 4, 5 Project Location: INEEL I INTEC Estimate Number: 2731-8

#1	Code Description Contractor	actor	Resource	oty o	La UOM Ho	Labor Hours	Labor Hourly Rate Cost	Equip Hours	Equipment Hourly Rate Cost	Material Unit Cost Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
233	Basin Cover Engineering & Design	sering & Design			•	1,104	\$68,228		0\$	\$0	0\$	\$0	\$68,228
234	E19 1.00 ICP SAFETY ENGINEERING		E19	160.00	H.s.	160	\$58.42 \$9,347		0\$	0\$	0\$	0 \$	\$9,347
238	1.00 ICP RADIOLOGICAL ENGINEERING		E18	160.00	Hrs.	160	\$60.64		0\$	0\$	9	O\$	\$9,702
3 2	E04 1.00 ICP CIVIL ENGINEERING		E04	240.00	Hrs	240	\$63.01 \$15,122		0\$	O\$	0\$	0\$	\$15,122
233	506 1.00 ICP ELECTRICAL ENGINEERING		E06	80.00	Hrs.	80	\$61.15 \$4,892		0\$	0\$	0\$	0 \$	\$4,892
23%	E11 1.00 ICP MECHANICAL ENGINEERING		E11	160.00	H.S.	160	\$56.27 \$9,003		%	0\$	0\$	9	\$9,003
239	E05 1.00 ICP DESIGN		E05	160.00	Hrs.	160	\$62.93 \$10,069		0\$	0\$	\$	O \$	\$10,069
240	1.00 ICP Engineering Suppervision @ 15% of labor hours	labor hours	602	960.00	E S	144	\$70.08 \$10,092		0\$	0\$	\$0	\$0	\$10,092
241	Basin Cover Construction	ruction			•	4,561	\$160,305		0\$	\$203,669	0\$	\$96,819	\$460,793
242	1.00 Structural Support Steel Over Ba channel) Memo: Assume steel will be p	5M00-5M9B asins (8" X 11.5# urchased as fabricated	U55-INL and painted ass	6,000.00 emblies wi	LBS th bolted c	240 connections.	\$35.93 \$8,623		O \$	\$1.05 \$6,300	9	34.67% \$5,174	\$20,097
243	1.00 Lumber 2 X 6 Fire Treated Memo: Assume lumber will sp	5M00-5M9B an structural members a	U06-INL at 2' on centers.	4,200.00	.	210	\$35.93 \$7,545		0\$	\$0.84 \$3,528	0\$	40.88%	\$15,600

INEEL

Estimating Services Department

Material Costs where applicable include Idaho State Sales Tax Page No. 23

Estimating Services Department

Detail Item Report

Project Name: CPP-603 EEICA Alternatives
Options 2, 3, 4, 5
Project Location: INEEL / INTEC
Estimate Number: 2731-8

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Description Contractor	Resource	Lal Qty UOM Ho	Labor Hours	Labor Hourly Rate Cost	Equip <u>Hours</u>	Equipment Hourly Rate Cost	Material Unit Cost Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
5M00-5M9B	U06-INL	11,000.00 Sq/Ft.	330	\$35.93 \$11,857		0 \$	\$0.23 \$2,541	\$0	49.41% \$7,114	\$21,512
1.00 5M00-5M9B Allowance For Sealing Tarps To Perimeter Of Basins	U06-INL	600.00 LF	24	\$35.93 \$862		0	\$0.11 \$63	0\$	55.91% \$517	\$1,443
1.00 5M00-5M9B Equipment Operator to support installation & disassembly of enclosures.	U12-INL	160.00 Hrs	160	\$32.32 \$5,171		0 \$	0\$	O \$	60.00% \$3,103	\$8,274
1.00 ICP Allowance For Sealants, Fasteners, & Consumables		1.00 Project		0\$		9	\$1,575.00 \$1,575	\$0	0 \$	\$1,575
1.00 ICP Exhaust Fan, HEPA Filters & Inlet Filters		2.00 EA		0 \$		9	\$77,175.00 \$154,350	\$0	9	\$154,350
5M00-5M9B	U47-INL	2.00 Places	80	\$35.93 \$2,874		9	0\$	09	60.00% \$1,725	\$4,599
5M00-5M9B es will be tested to ensur	U47-INL e negative pre	1.00 5M00-5M9B U47-INL Enclosure Testing 3.00 Locatio Memo: Assume basin enclosures will be tested to ensure negative pressures in enclosures.	240	\$35.93 \$8,623		0\$	\$262.50 \$788	9	54.98% \$5,174	\$14,585
1.00 5M00-5M9B Labor to disassemble enclosures & box materials for disposal	NOG-INL	1.00 Project	440	\$35.93 \$15,809		0\$	0\$	9	60.00% \$9,486	\$25,295
1.00 ICP Waste containers for contaminated material		2.00 EA		\$0		9	\$6,300.00 \$12,600	\$0	\$0	\$12,600
1.00 5M00-5M9B Allowance For Temporary Lighting In Containments	U11-INL	3.00 Locatio	240	\$36.16 \$8,678		%	\$2,100.00 \$6,300	0\$	34.76% \$5,207	\$20,185
1.00 5M00-5M9B Labor Support To Stock & Remove PPEs	U21-INL	520.00 Hrs	520	\$21.16 \$11,003		\$	0\$	0\$	60.00% \$6,602	\$17,605

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL I INTEC
Estimate Number: 2731-8

Detail Item Report

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Code	Description contractor	Resource	Qtv	NOM HG	Labor	Labor Hourly Rate Cost	Equip <u>Hours</u>	Equipment Hourly Rate Cost	Material Unit Cost Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
255 Allowance For PPEs	1.00 ICP or PPEs		416.00	416.00Changes		0\$		0\$	\$37.56 \$15,624	0\$	\$	\$15,624
256 Allowance F	1.00 5M00-5M9B Allowance For PODs & Daily Safety Meetings	U06-INL	208.00	Days	832	\$35.93 \$29,894		O\$	0\$	\$0	60.00% \$17,936	\$47,830
257 Labor for ch	1.00 5M00-5M9B Labor for changes into/out of PPEs	NO6-INL	416.00	416.00changes	416	\$35.93 \$14,947		0\$	0\$	\$0	60.00% \$8,968	\$23,915
্রেড Craft Supen Hrs	1.00 5МОО-5МЭВ Craft Supervision / Subject Mater Expert @ 15% Of Labor Hrs	Z11-INL abor	3,316.00	H ₃	497	\$43.60 \$21,687		0\$	0\$	0\$	60.00% \$13,012	\$34,699
259 U60-INL RAD TECH Labor Hrs.	U60-INL 1.00 7600-7632 U60- RAD TECH to Support Containment Erection/Removal 10% of Labor Hrs.	U60-INL al 10% of	3,316.00	Hrs	332	\$38.39		0\$	\$	0\$	65.00% \$8,275	\$21,005
262	Radiation Shielding				993	\$35,669		98	\$40,537	0\$	\$21,401	\$97,607
263 Shielding P	1.00 ICP Shielding Plates (1/2" thk CS Plate)		55,152.00	o Lbs		0\$		9	\$0.73 \$40,537	0\$	9\$	\$40,537
254 USS-INL WELDER	1.00 SM00-SM9B	U55-INL	55,152.00	o Lbs	993	\$35.93 \$35,669		\$0	0\$	0\$	60.00% \$21,401	\$57,070
265	Basin Decontamination / Stabilization Basis of Estimate: Costs are based on v	ttion / Stabilization Costs are based on vendors quote 3/22/04.	quote 3/2	2104.	0	0\$		0\$	O \$	\$448,365	\$0	\$448,365
266 Divers to cl	1.00 ICP Divers to clean floors, wall & apply fixative		1.0	1.00 Project		0\$		0 \$	0\$	\$448,365.00 \$448,365	0\$	\$448,365

Material Costs where applicable include Idaho State Sales Tax Page No. 25

Estimating Services Department

Detail Item Report

Project Name: CPP-603 EEICA Alternatives
Options 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

TOTAL	\$481,659
Other % Cost	\$50,143
Subcontract Unit Cost Cost	\$0
Material Unit Cost Cost	\$0
Equipment Hourly Rate Cost	\$0
Equip Hours	
Labor Hourly Rate Cost	\$431,516
Labor UOM Hours	8,292
Resource Qty	
Description Contractor	Project Management & Support
# Code	267

Client: B. T. Richards
Prepared By: D. T. Peterson I R. R. Honsinger
Estimate Type: PlanningIROM

# Code	Description Contractor	itractor	Resource	Qtv	NOM H	Labor Hours	Labor Hourly Rate Cost	Equip Hours	Equipment Hourly Rate Cost	Material Unit Cost Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
267	Project Management & Support	nent & Support			3	8,292	\$431,516		0\$	0\$	\$0	\$50,143	\$481,659
268 E28 PROJ MGN	E28 1.00 ICP PROJ MGMNT - ENGINEERING/SCIEN 1 FTE	CIEN 1 FTE	E28	1.00	Year	1,750	\$72.34 \$126,595		0\$	9\$	0\$	0\$	\$126,595
269 X12 ENVIRONN	X12 1.00 ICP ENVIRONMENTAL RESTORATION	_	X12	1.00	Year	1,750	\$48.62 \$85,085		9	%	0 \$	%	\$85,085
270 U60-INL RADIOLOG	U60-INL 1.00 7601 RADIOLOGICAL CONTROL TECH	7600-7632 .CH	U60-INL	1.00	Year	1,750	\$38.39 \$67,183		0\$	0\$	9	65.00% \$43,669	\$110,851
271 Z08 SUPERVISO	208 1.00 7601 SUPERVISOR, OPERATIONS	7600-7632	Z08-INL	1:00	Year	175	\$56.92 \$9,961		9	0\$	0\$	65.00% \$6,475	\$16,436
272 E19 SAFETY EN	E19 1.00 ICP SAFETY ENGINEERING		E19	1.00	Year	875	\$58.42 \$51,118		9	%	0 \$	0	\$51,118
273 SOB INDUSTRIA	S08 1.00 ICP INDUSTRIAL HYGIENE		808	1.00	Year	875	\$48.47 \$42,411		9	0\$	0\$	\$0	\$42,411
274 P44 PLANNING	P44 1.00 ICP PLANNING AND CONTROLS		P44	1.00	Year	437	\$46.21 \$20,194		9	0\$	0 \$	\$0	\$20,194
275 F22 COST ESTIMATING	1.00 ICP IMATING		F22	1.00	Year	170	\$52.99 \$9,008		%	0\$	9	0\$	800'6\$
276 A14 SECRETARIAL	1.00 ICP		A14	1.00	Year	350	\$23.05 \$8,068		9	0\$	0\$	\$0	\$8,068
SUBCONTR	P21 1.00 ICP SUBCONTRACT ADMIN		P21	1.00	Year	160	\$74.34		0\$	O\$	\$0	0\$	\$11,894

Client: B. T. Richards
Prepared By: D. T. Peterson I R. R. Honsinger
Estimate Type: PlanningIROM

Project Name: CPP-603 EEICA Alternatives
Opitions 2, 3, 4, 5.
Project Location: INEEL / INTEC
Estimate Number: 2731-8

**	Description	Contractor	Resource	O A	La UOM Ho	Labor Hours	Labor Hourly Rate Cost	Equip Hours	Equipment Hourly Rate Cost	Material Unit Cost	Subcontract Unit Cost Cost	Other % Cost	TOTAL
82						12,800	\$470,080		0\$	0\$	\$81,000	\$280,414	\$831,494
279 UGO-INL RADIOLC	1.00 i	U60-INL 1.00 7606-7632 U60-INL RADIOLOGICAL CONTROL TECH (Monitoring & surveillance)	-int	20.00	Years	3,200	\$38.39 \$122,848		0\$	\$0	0\$	65.00% \$79,851	\$202,699
280 T16-INL INDUST 8	1.00 SAFETY/HEALTH TECH	T15-INL INDUST SAFETY/HEALTH TECH(Monitoring & surveillance)	iNL (20.00 Years	Years	3,200	\$32.22 \$103,104		0 \$	0\$	0\$	65.00% \$67,018	\$170,122
281 F21-INL OTHER F	1.00 ACILITY SERVICES	5M00-5M9B U29-INL	ĮN -IN	20.00	Years	3,200	\$35.88 \$114,816		0 \$	0\$	0\$	60.00% \$68,890	\$183,706
282 F28-INL SECURIT	1.00 Y COORDINATORS	P000-P230 F28-INL	iNL	20.00	Years	3,200	\$40.41 \$129,312		9	90	0\$	50.00% \$64,656	\$193,968
Apply fixa Apply fixe intervals Memo:	1.00 ICP Apply fixative to existing walls & floors at 6 yr. intervals Memo: Cost based on vendors quote, see jo	1.00 ICP ative to existing walls & floors at 6 yr. Cost based on vendors quote, see job file quote 3/22/04.	704.	3.00 £	3.00 Events		0\$		0\$	0\$	\$27,000.00 \$81,000	0	\$81,000
284	Earth Cap Ov	Earth Cap Over Building Foot Print			က	3,029	\$111,690		\$98,040	\$218,159	0\$	\$124,216	\$552,106
285	Purchase & Hai	Purchase & Haul Low - Permeability Soil Layer	ayer		•	1,637	\$60,200		\$39,696	\$213,381	0\$	\$90,944	\$404,221
286 Purchase Memo:	1.00 Purchase Low Permeability Soil Memo: Assume soil will be imp	1.00 DIRT e Low Permeability Soil Assume soil will be imported from an off-Site source.		6,774.00	ઠ		O \$		O\$	\$31.50 \$213,381	0 \$	29.03% \$61,945	\$275,326
287 Operator	1.00 Operator & Loader	DIRT CN-E	CN-EQMD	6,774.00	Շ	4	\$36.78 \$1,495		229\$	\$0	O\$	29.03% \$631	\$2,803
288 Teamste Memo:	1.00 Teamster & Belly Dump Memo: Assume 4 Hr. for round	1.00 DIRT Teamster & Belly Dump Memo: Assume 4 Hr. for round trip with 20 cubic yard belly dump.		6,774.00	Շ	1,355	\$36.34 \$49,233		\$35,225	O\$	0\$	29.03% \$24,518	\$108,976
289 Operator INFFI	1.00 Operator & Water Wagon ⊏ F I	DIRT CN-E	CN-EQMD	6,774.00	Շ	4	\$36.78 \$1,495		\$1,016	0\$	0\$	29.03% \$729	\$3,240
						Ectima	Ectimating Convices De	Donartmo	Ž	Material Cost	Material Costs where applicable include Idaho State Sales Tax Page No 26	include Idaho State Page No	Sales Tax

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Page No.

Estimating Services Department

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08/31/2004

Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives
Options 2, 3, 4, 5
Project Location: INEEL / INTEC
Estimate Number: 2731-8

TOTAL	\$4,201	\$3,240	\$1,790	\$4,645	\$147,885	\$4,001	\$110,212	\$4,625
Other % Cost	29.03% \$945	29.03% \$729	29.03% \$403	29.03% \$1,045	\$33,272	29.03% \$900	29.03% \$24,796	29.03% \$1,040
Subcontract Unit Cost Cost	9	0	0\$	\$	0\$	\$0	\$0	\$0
Material Unit Cost Cost	0\$	0\$	9	0\$	\$4,778	0\$	0	0\$
Equipment Hourly Rate Cost	\$1,761	\$1,016	0\$	0\$	\$58,345 project.	296\$	\$50,279	\$1,450
Equip Hours					bcontractor or			
Labor Hourly Rate Cost	\$36.78 \$1,495	\$36.78 \$1,495	\$34.68 \$1,387	\$3,600	\$51,490 no cost to the su	\$36.78 \$2,134	\$36.34 \$35,137	\$36.78 \$2,134
oc Irs	14	4	4	80	1,391 le source at	28	296	28
Labor OM Hours	Շ	Շ	Ŧ ē	H.	1, on-Site	់	ò	≿
Oty U	6,774.00	6,774.00	40.00	80.00	ted from an	00.699'6	00.699.6	00'699'6
Resource Qty_ UOM	CN-EQMD	CN-EQMD	CN-SURR	CN-GEN	1,391 \$51,490 Assume this soil will be imported from an on-Site source at no cost to the subcontractor or project.	CN-EQMD	1.00 DIRT Teamster & Belty Dump Memo: Assume 2 Hr. for round trip with 20 cubic yard belly dump.	CN-EQMD
Contractor	DIRT	DIRT	DIRT	DIRT		DIRT	<i>DIRT</i> 1 trip with 20 o	DIRT
Description Contractor	1.00 totor Grader	1.00 ompactor	1.00 er	1.00 ickup	Vegetated Soil Layer Basis of Estimate:	1.00	1.00 lelly Dump ume 2 Hr. for rounc	0
Code	1.0 Operator & Motor Grader	Operator & Compactor	Grade Checker	Foreman & Pickup	8	Operator & Loader	1. Teamster & Belly Dump Memo: Assume 2 Hr. fe	1.0 Operator & Water Wagon
11:)	200	297	292	293	294	262	28g	767

INEEL

\$4,625

29.03% \$1,040

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\$1,450

\$5,997

29.03% \$1,349

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\$0

\$2,514

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9,669.00

CN-EQMD

DIRT

1.00 Operator & Motor Grader

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9,669.00

CN-EQMD

DIRT

1.00

Operator & Compactor

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\$1,790

29.03% \$403

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CN-SURR

DIRT

1.00

Grade Checker

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Client: B. T. Richards
Prepared By: D. T. Peterson / R. R. Honsinger
Estimate Type: Planning/ROM

Project Name: CPP-603 EEICA Alternatives
Opitons 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

TOTAL	\$9,862	\$6,774	\$233,392	\$96,215	\$75,194	
Other % Cost	29.03% \$2,219	29.03% \$1,524	\$92,054	\$49,219	60.00% \$28,198	
Subcontract Unit Cost Cost	0\$	\$0	\$	0\$	0\$	
Material Unit Cost Cost	\$27.30 \$4,778	\$0	\$21,000	\$0	9	
Equipment Hourly Rate Cost	\$935	\$750	\$1,950	0\$	0\$	
Equip <u>Hours</u>			1,250			
Labor Hourly Rate Cost	\$36.78 \$1,931	\$45.00 \$4,500	\$118,388	\$46,996	\$21.16 \$46,996	
Labor Qty UOM Hours	53 175.00 M. S. F	100 100.00 Hrs.	8 4,579	2,221	2,221.00 Hrs. wer.	
Resource	CN-EQMD	CN-GEN	sin Cover & Shielding	Cover & Shielding	U21-INL cct shielding and basin co	
Code Description Contractor	1.00 'DIRT Allowance for seeding	1.00 DIRT Foreman & Pickup		basin rill Remove & Dispose of Basin Cover & Shielding	1.00 5M00-5M9B U21-INL 2.22 Remove & Dispose of Basin Cover & Shieding 2000 Shieding and basin cover. Memo: Cost based on 40% of the labor to erect shielding and basin cover.	
**1	301	305	303	304	302	

)e 1
\$42,835 area will <i>k</i> 603 and
0 o form load near CPP-4
\$ round trip a location
2,358 \$71,392 1,250 \$1,950 \$21,000 \$0.000 \$0.0000 \$24,000 \$24,000 \$0.0000 \$0 \$42,835 \$0.00000 \$0.00000000000000000000000000
\$1,950 be loaded at an e equired 666 load ed.
1,250 ne material will I r load and will re rial will be requir
\$71,392 fill basins. Assur at 15 minutes per ction of fill mater
2,358 \$71,392 1,250 blo yards of fill being required to fill basins. Assume material will be loabe loaded on 12-yard end dumps at 15 minutes per load and will require nto the basins. Assume no compaction of fill material will be required.
ubic yards (be loaded into the bas
Costs are based on 7997 cublc ya hour. Assume material will be loa distributed via conyevors into the
s are based Assume n
Costs hour.
Basin Fill Basis of Estimate:

\$19,656

100.00% \$19,656

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\$0

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72.00

1.00 ICP Dispose of contaminated barrier materials & PPEs

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1.00

Dispose of shielding

307

300

\$1,365

100.00% \$1,365

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5.00

\$137,176

\$1,160	\$752		
0\$	0\$		
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\$0	0\$		
\$2.90 \$1,160	\$752		
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400.00	800.00		
75626	71792		
309 75626 1.00 ICP LOADER, FRONT END (Assume two loader required)	310 71792 1.00 ICP TRUCK - DUMP 12 BCUYD (Assume four trucks will be required)		

INEEL

Project Name: CPP-603 EEICA Alternatives
Opitions 2, 3, 4, 5
Project Location: INEEL | INTEC
Estimate Number: 2731-8

B. T. Richards	D. T. Peterson I R. R. Honsinger	PlanningIROM
Client:	Prepared By:	Estimate Type: PI

TOTAL	\$62,054	\$27,085	\$21,000	\$3,636	\$38	\$21,451
Other % Cost	60.00% \$23,270	60.00% \$10,157	0\$	60.00% \$1,364	0\$	60.00% \$8,044
Subcontract Unit Cost Cost	0\$	9	\$	0\$	9	O \$
Material Unit Cost Cost	0\$	0\$	\$21,000.00 \$21,000	0\$	0\$	0\$
Equipment Hourly Rate Cost	0\$	0\$	\$	\$0	\$0.75 \$38	%
Equip Hours					20	
Labor Hourly Rate Cost	\$32.32 \$38,784	\$21.16 \$16,928	0\$	\$45.46 \$2,273	9	\$43.60 \$13,407
Labor	1,200	800		20		308
	Ξ Σ	Ξ	1.00 Project	Wks.	£	
Otv U	1,200.00	800.00	1.00	5.00	90.00	2,050.00
Resource Qtv. UOM	U12-INL it operators	U21-INL	yers to	U12	71797	Z11-INL
<u>Description</u> Contractor	U12-INL 1.00 5M00-5M9B U12- EQUIPMENT OPERATOR (Assume six equipment operators will be required)	U21-INL 1.00 5M00-5M9B LABORER (Assume four labors will be required)	1.00 ICP Allowance for purchase of special equipment/conveyers to distribute basin fill	1.00 5M00-5M9B 5/Operator	1.00 ICP EET POOL)	211-iNL 1.00 5M00-5M9B FOREMAN, CRAFTS @ 15% of labor hours
BSCL	, RATC	Je f	2	- 2	بے	ĭ
Code Descri	311 U12-INL EQUIPMENT OPERATO will be required)	312 U21-INL LABORER (Assume f	313 Allowance for purcha distribute basin fill	374 U12 1.00 Lube Truck Mechanic/Operator	316 71797 1.00 1 TRUCK - LUBE (*FLEET POOL)	316 Z11-INL FOREMAN, CRAFTS